

Broader Impacts: Ideas and Activities

(last updated: 3/22/2019)

"**Broader Impacts**" are the societal benefits of research. (as defined in NSF's Grant Proposal Guide Section III.A.2). Some other terms used to refer to Broader Impacts are "societal impacts," "broadening participation," "community engagement," or "public outreach." Broader Impacts must make sense in the context of the research. Sometimes "research impacts" can be the broader impacts of the project in and of itself, if you can make the case for it. The education, knowledge transfer and diversity activities should not be long lists of activities, but rather should be focused and integrated with the research activities. These activities should be a balance between existing/evidence-based practices and innovative plans, and should include formal evaluation.

BROADER IMPACTS @ NDSU	Website	Contact Person	Department/Unit	Comments
NDSU: North Dakota Governor's Schools - exceptional high school students participate in mentored research projects at NDSU campus during summer	https://www.ndsu.edu/govschool/	Ryan.Neimann@ndsu.edu	ND Governor's School - NDSU	
NDSU: North Dakota Southeast Regional Science & Engineering Fair. A March event at NDSU where projects by area junior and senior high school students are judged by volunteers	http://www1.und.edu/ndssef/southeast.php	Patty.Kratz@k12.nd.us	North Dakota State Science & Engineering Fair <u>or</u> the NDSU Office of Teaching & Learning	
NDSU: Computer Science Education Week. For students, teachers, and people in industry, this event allows students to be introduced to computer science. Activities may involve company tours, guest speakers, the worldwide "Hour of Code", etc.	https://www.ndsu.edu/news/view/detail/31837/	Jeremy.Straub@ndsu.edu	Department of Computer Science	

<p>NDSU: ND Science Olympiad is a middle school and high school team competition where students compete in events pertaining to various STEM topics. This is a very large event held annually in April, with over 800 middle and high school students, teachers, and spectators who arrive on campus to participate. Requires many volunteers to help; covers multiple disciplines: Personal & Social Science; Earth & Space Science; Physical Science & Chemistry; Technology & Engineering; and Inquiry & Nature of Science.</p>	<p>https://www.ndsu.edu/olympiad/</p>	<p>Guy.Hokanson@ndsu.edu ashley.l.birkle@ndsu.edu</p>	<p>Hosted in public service by North Dakota State University</p>	
<p>NDSU: Expanding Your Horizons - young women in grades 7-9 are invited to learn about careers in STEM and related fields. A one-day conference with more than 40 hands on workshops in various locations throughout the Fargo-Moorhead area. There are approximately 600 participants each year. (This is also a nationwide program)</p>	<p>https://www.ndsu.edu/csme/expanding_your_horizons/?utm_medium=email&utm_campaign=April%20Science%20events%20-%20volunteer%20request&utm_content=April%20Science%20events%20-%20volunteer%20request+Preview+CID_801c39c09082ca531d99309ceec686a58&utm_source=Campaign%20Monitor&utm_term=Read%20more</p>	<p>phone 701.231.7015 or 1.800.726.1724 or email ndsu.otl@ndsu.edu</p>	<p>Office of Teaching and Learning - Paul Kelter, Director, and Karen Murie, Expanding Your Horizons Coordinator</p>	
<p>NDSU: Showcase of Student Writing and Writing Challenge (W-Challenge) Beginning in 2016, the Showcase of Student Writing - Inclusive of projects designed for academic, professional, and creative spaces, this interactive platform for written work is an opportunity to explore the diverse range of writing created by NDSU students over the course of their undergraduate careers.</p>	<p>https://www.ndsu.edu/english/writing_challenge_and_showcase_of_student_writing/</p>	<p>ndsu.writing@ndsu.edu</p>	<p>Office of Teaching and Learning - Paul Kelter, Director</p>	

<p>NDSU Avenues of Scientific Discovery - Graduate students host interactive science event for local high school students and the community. http://www.ndsu.edu/happenings/detail.asp?newsID=1292</p>	<p>https://www.ndsu.edu/csme/aosd/</p>	<p>Event Coordinators: Jill.Motschenbacher@ndsu.edu and Nicole.Hagness@ndsu.edu</p>	<p>Sponsored by (1) Office of Teaching and Learning - Jill Motschenbacher, Associate Director (2) Office of Admission (3) Graduate School</p>	
<p>NDSU: ROPES - Research Opportunities for Engaging (undergraduate) Students</p>	<p>http://www.ndsu.edu/scimath/undergraduate_research/research_opportunities_for_engaging_students/</p>	<p>Dr. Scott Wood, Dean of the College of Science and Mathematics, scott.wood@ndsu.edu</p>	<p>College of Science and Mathematics</p>	
<p>NDSU: ND EPSCoR - NATURE (Nurturing American Tribal Undergraduate Research and Education) • Summer Camp at NDSU includes introducing tribal college students to STEM disciplines and career opportunities, exposing them to city and campus life, attracting them to four year STEM programs, and engaging tribal high school and college faculty in career improvement and lesson development. Sunday Academies held throughout academic year.</p>	<p>https://www.ndepscor.ndsu.edu/ndep/nature/</p>	<p>Scott Hanson, Tribal College Liaison; scott.martin.hanson@ndsu.edu or 701.231.8606</p>	<p>ND EPSCoR https://www.ndepscor.ndsu.edu/</p>	
<p>NDSU: ND EPSCoR - STTAR (Students in Technology Transfer and Research) This program provides upper division students (undergraduate juniors through graduate students) in STEM fields an opportunity to engage in research and development with a private sector company. ND EPSCoR cost-shares the student salary; companies pay at least half the student salary.</p>	<p>https://www.ndepscor.ndsu.edu/ndep/sttar/</p>	<p>ndepscor@ndsu.edu or call 701.231.8400</p>	<p>ND EPSCoR https://www.ndepscor.ndsu.edu/</p>	

<p>NDSU: EXPLORE - annual event showcasing undergraduate research across campus. In addition, Undergrad Research Week encourages students and faculty to get more involved in research.</p>	<p>http://www.ndsu.edu/research/research_development/ndsu_explore/</p>	<p>Cassie Johnson, cassandra.j.johnson@ndsu.edu</p>	<p>Office of Research and Creative Activity, Research Development</p>	
<p>NDSU: HOPE Camp. Four days of hands-on-activities and classes to explore a wide variety of health professions and health career opportunities while becoming familiar with the hospital and college campus settings. Most students attending the camp are considering college to become a health professional. HOPE is offered by Sanford Health Fargo and NDSU College of Health Professions. The camp is open for rural students entering 10th - 12th grades in fall. (Students who are just graduating are also accepted)</p>	<p>https://www.ndsu.edu/healthprofessions/hope_camp/</p>	<p>Dana Davis, Director of Outreach and Community Engagement, dana.davis@ndsu.edu or 701.231.7837</p>	<p>College of Health Professions</p>	
<p>NDSU: The Great Healthcare Adventure. A fun and interactive way to introduce K-12 students to the depth and diversity of careers in health care. This program also inspires students who are interested in science combined with opportunities to help others to further their education beyond high school.</p>	<p>https://www.ndsu.edu/healthprofessions/ghca/</p>	<p>Dana Davis, Director of Outreach and Community Engagement, dana.davis@ndsu.edu or 701.231.7837</p>	<p>College of Health Professions</p>	

<p>NDSU: Madison Elementary Mentor Program - The College of Health Professions is an official Community Partner of Madison Elementary School, Fargo. Faculty, staff, and students in the College have the opportunity to be matched with an elementary student at Madison. College mentors meet their Madison mentees once a week during lunch and recess. The program helps Madison students foster relationships with positive role models in their community.</p>	<p>http://www.ndsu.edu/healthprofessions/madison/</p>	<p>Dana Davis, Director of Outreach and Community Engagement, dana.davis@ndsu.edu or 701.231.7837</p>	<p>College of Health Professions</p>	
<p>NDSU: Growing UP STEM - A 10-week summer research experience for undergraduate students that includes on-campus housing, a \$5,000 stipend, and offers students the opportunity to experience discipline-based education research (NSF-DUE 1156974)</p>	<p>http://www.ndsu.edu/cider/reu/</p>	<p>Dr. Jenni Momsen, jennifer.momsen@ndsu.edu; Dr. Warren Christensen, warren.christensen@ndsu.edu.</p>	<p>Collaborations in Discipline-Based Education Research (CIDER)</p>	
<p>NDSU: Noyce Scholars and Interns Program - seeks to enhance the quantity and quality of secondary science and mathematics teachers across North Dakota and adjacent states.</p>	<p>http://www.ndsu.edu/cider/noyce/</p>	<p>Dr. Lisa Montplaisir, lisa.montplaisir@ndsu.edu or 701.231.6155 or Dr. Jeff Boyer, jeffrey.boyer@ndsu.edu or 701.231.5953</p>	<p>Collaborations in Discipline-Based Education Research (CIDER)</p>	
<p>NDSU: Extension Reaching Native American Audiences</p>	<p>https://www.ag.ndsu.edu/extension/features/reaching-native-american-audiences</p>	<p>NDSU.ExtensionDirectorsOffice@ndsu.edu</p>	<p>NDSU Extension Service</p>	
<p>NDSU: BEST Robotics - to inspire middle and high school students to pursue careers in engineering, science, and technology through sports-like competition</p>	<p>https://www.ndsu.edu/coe/k_12_outreach/stem_k_12_offerings/best_robotics/</p>	<p>Jim Walter, jwalter@702communications.com or 218.329.1799</p>	<p>College of Engineering</p>	

<p>NDSU: STEM Kids - day camps for kids Grades 3-5 and Grades 6-8 as well as STEM High School Bootcamp for Grades 9-12. In addition, NDSU Engineering students, faculty, and staff host after-school STEM Clubs at several area schools.</p>	<p>https://www.ndsu.edu/dce//courses/info/17540</p>	<p>Nicole Hagness, Nicole.Hagness@ndsu.edu u</p>	<p>Office of Teaching and Learning and the College of Engineering</p>	
<p>NDSU: TechGYRLS or GEEK (Girls Expanding Engineering Knowledge) - 10 week after-school program to introduce young girls in grades 3-5 to science, technology, engineering & mathematics disciplines</p>	<p>https://www.ndsu.edu/coe/outreach/techgirls/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798</p>	<p>hosted by Society of Women Engineers, NDSU. College of Engineering</p>	
<p>NDSU: Tech Teens is a program for girls in grades 6-12 to explore the different engineering practices through several projects that allow a hands on opportunity to learn how to form scientific questions and solve them. The program encourages and empowers girls to become engineers.</p>	<p>https://www.ndsu.edu/coe/outreach/tech_teens/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798</p>	<p>hosted by Society of Women Engineers, NDSU. College of Engineering</p>	
<p>NDSU: TechBOYZ - is a program for boys in grades 3-5 to introduce them to science and engineering concepts.</p>	<p>https://www.ndsu.edu/coe/outreach/techboyz/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798</p>	<p>College of Engineering</p>	

<p>NDSU: BrainSTEM - BrainSTEM is a daylong STEM career conference designed to introduce girls and boys to STEM fields. It begins with a hands-on workshop, led by industry professionals, faculty and engineering students, that highlights math and science fields and concludes with a focus on skills such as budgeting, critical thinking and public speaking that are important in STEM careers and everyday life.</p>	<p>https://www.ndsu.edu/fileadmin/coe/STEM_Alliance/Outreach_Sponsorship_Brochure_12.pdf</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>College of Engineering, co-hosted with the local chapter of the American Association of University Women. College of Engineering</p>	
<p>NDSU: Mommy, Me and SWE - is a one-day event offered for girls grades K-2 as well as their mothers. The daughters do hands-on projects introducing them to the different types of engineering, while the moms learn how to encourage their daughters to continually follow their interests in STEM subjects.</p>	<p>https://www.ndsu.edu/coe/outreach/mommy_me_swe/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>hosted by Society of Women Engineers; College of Engineering</p>	

<p>FIRST® LEGO® League in North Dakota (ND FLL®) is part of an international robotics program that includes more than 200,000 kids in 63 countries. Teams collaborate to build and program an autonomous robot to score points on a thematic playing surface (the Robot Game) and create an innovative solution to a problem correlated to the yearly theme (the Project), all while guided by the FLL Core Values. These three elements; the Robot Game, the Project, and FLL Core Values make up what is called The Challenge. This year, there were two Fargo Tournaments in January; one at Carl Ben Middle School and one at Liberty Middle School.</p>	<p>https://www.ndsu.edu/coe/outreach/first_lego_league_fil/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>College of Engineering</p>	
<p>NDSU: Perry Initiative - NDSU hosts the one-day Perry Initiative in March for 40 high school sophomores, juniors and seniors. Laboratory-based workshops introduce surgical and engineering skills along with small-group mentoring from female surgeons, biomedical engineers and business professionals in orthopedics. Students perform mock surgeries on anatomical models and conduct basic biomechanics experiments.</p>	<p>https://www.ndsu.edu/fileadmin/coe/STEM_Alliance/Outreach_Sponsorship_Brochure_12.pdf</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>College of Engineering</p>	

<p>NDSU: DADDS (Dads And Daughters Do Science) - a one-day program for girls in grades K-2 and their dads. Young girls learn to explore the different branches of science while doing hands-on activities with their dads, while dads learn to encourage their daughters to pursue their interests.</p>	<p>https://www.ndsu.edu/coe/outreach/dads_and_daughters_do_science_dadds/</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>hosted by Society of Women Engineers; College of Engineering</p>	
<p>NDSU: TEAMS (Tests of Engineering Aptitude, Mathematics and Science) - NDSU is a host site for the Technology Student Association TEAMS competition. TEAMS stands for Tests of Engineering Aptitude, Mathematics and Science. The annual one-day, two-part academic competition challenges students in grades 9-12 to work cooperatively and think creatively to solve real, everyday engineering problems. The experience introduces them to an engineering teamwork environment while they compete for local, state and national awards and recognition.</p>	<p>https://www.ndsu.edu/fileadmin/coe/STEM_Alliance/Outreach_Sponsorship_Brochure_12.pdf</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>College of Engineering</p>	
<p>STEM Alliance - The NDSU College of Engineering STEM Alliance is a partnership between NDSU and area businesses that work together to make a tangible difference in the lives of K-12 students. Its purpose is to increase the number and diversity of college- and career-ready students being introduced to STEM careers in our region.</p>	<p>https://www.ndsu.edu/fileadmin/coe/STEM_Alliance/Outreach_Sponsorship_Brochure_12.pdf</p>	<p>Lauren Singelmann, Outreach Coordinator, at lauren.n.singelmann@ndsu.edu or (701) 231-5798 or Dr. Scott Pryor, scott.pryor@ndsu.edu or 701.231.8432</p>	<p>College of Engineering</p>	

<p>NDSU: Research Experience for Teachers is a comprehensive professional development 6-week summer program in engineering, research, and design, focus on providing knowledge, skills, and resources to middle and high school rural educators in science, mathematics, and technology education. Funded by National Science Foundation.</p>	<p>https://www.ndsu.edu/ret/</p>	<p>Dr. Alan Kallmeyer, alan.kallmeyer@ndsu.edu or 701.231.8835</p>	<p>College of Engineering</p>	
<p>NDSU: K.N. Rao Competition - Each year the NDSU Department of Mathematics sponsors a regional college Mathematics competition in honor of our colleague, K. N. Rao. The competition is a contest of individual mathematical knowledge and expertise as measured by performance on a series of written problems. The expectation of preparation for this contest is calculus and an introductory course in linear algebra.</p>	<p>https://www.ndsu.edu/math/outreach_events/kn_rao_competition/</p>	<p>Dr. Benton Duncan, benton.duncan@ndsu.edu; 701.231.8175</p>	<p>Mathematics</p>	
<p>NDSU: North Dakota Mathematics Talent Search - The Department of Mathematics at NDSU hosts an annual North Dakota Mathematics Talent Search. The talent search aims to stimulate students through problem-solving, to identify high-school students in North Dakota and surrounding areas with a talent for solving mathematical problems, to reward these students and their teachers for their efforts, and to encourage these students to pursue a major in the mathematical sciences or engineering at NDSU.</p>	<p>https://www.ndsu.edu/math/outreach_events/nd_talent_search/</p>	<p>Dr. Benton Duncan, benton.duncan@ndsu.edu; 701.231.8175</p>	<p>Mathematics</p>	

<p>NDSU: Sonia Kovalevsky Day is a program of mathematics activities for young high school women.</p>	<p>https://www.ndsu.edu/math/outreach_events/sonia_kovalevsky_day/</p>	<p>Dr. Benton Duncan, benton.duncan@ndsu.edu; 701.231.8175</p>	<p>Mathematics</p>	
<p>NDSU: Pollination Nation - biological research on honeybees, involves undergraduate researchers. Women, students from Tribal Colleges, and those from groups typically underrepresented in science are especially encouraged to apply.</p>	<p>https://www.ndsu.edu/biology/pollinationnation/</p>	<p>Dr. Kendra Greenlee; Dr. Julia Bowsher</p>	<p>Biological Sciences</p>	
<p>NDSU: Innovation Challenge - open to all undergraduate and graduate students. Encourages entrepreneurial activities.</p>	<p>https://www.ndsuresearchpark.com/innovation-challenge/</p>	<p>Emily Schubert, emily@ndsuresearchpark.com or 701.499.3604</p>	<p>NDSU Research & Technology Park</p>	
<p>NDSU: 4-H Youth Development Programming. 4-H has events, programs, overnight trips, camps, and contests for many different interest areas. North Dakota youth may participate; some programs do not require 4-H membership.</p>	<p>https://www.ndsu.edu/4h/programs_events/</p>	<p>ndsu.4-H@ndsu.edu</p>	<p>Center for 4-H Youth Development</p>	
<p>NDSU: INBRE Summer Undergraduate Research Program - for Tribal College Students to explore career opportunities, understand research methods, gain study strategies, and meet future mentors.</p>	<p>https://www.ndsu.edu/publichealth/inbre_summer_undergrad/</p>	<p>Pearl Walker-Swaney - INBRE Project Manager, pearl.walker@ndsu.edu, or 701-231-6111</p>	<p>Coordinated by Department of Public Health</p>	

<p>NDSU: CPM Summer Undergraduate Research Experience (SURE) - Summer research appointments for chemistry, materials science, chemical engineering, and related fields, between their junior and senior years, who intend to pursue graduate studies and have an interest in Polymers and Costings Science</p>	<p>https://www.ndsu.edu/cpm/summer_undergraduate_research_experience/</p>	<p>Dr. Andriy Voronov, andriy.voronov@ndsu.edu or 701.231.9563</p>	<p>Coatings and Polymeric Materials</p>	
<p>NDSU: Kiddie Days and Moos, Ewes, & More. These two events are hands-on agricultural learning experiences geared toward daycare, preschool, and kindergarten-aged children. Kids have the opportunity to see, touch, and ask questions about various farm animals. These public events are coordinated and presented by the members of the NDSU Saddle & Sirloin Club, a student organization.</p>	<p>https://www.ag.ndsu.edu/ansc/news-events/event-kiddie-days</p>	<p>ndsu.ansc@ndsu.edu</p>	<p>sponsored by Saddle & Sirloin Club, an NDSU student organization.</p>	
<p>NDSU: Science Café is a program offered free to the public at Stoker's Basement, Hotel Donaldson, 101 N. Broadway, in downtown Fargo. Each event features a presentation by a scientist and includes discussion with audience members. Attendees must be 21 or older, or accompanied by a parent or guardian. Science Café events are about one hour long with extra time allowed for discussions.</p>	<p>http://earth.physics.ndsu.nodak.edu/</p>	<p>Contact the Office of the Dean of Science & Mathematics, NDSU. Phone: 701.231.7411 or email diane.goede@ndsu.edu</p>	<p>sponsored by the College of Science and Mathematics, NDSU</p>	

<p>NDSU: Upward Bound is a college access and preparation program funded by the U.S. Dept. of Education and sponsored by NDSU since 1967. It is designed to help students succeed in high school and prepare for continued success in college. The NDSU Upward Bound program is funded to serve fifty income-eligible and potential first-generation college students in grades 9-12 from target high schools - Davies, Fargo North, Fargo South, Sheyenne, and West Fargo.</p>	<p>https://www.ndsu.edu/trio/upwardbound/</p>	<p>angela.seewald-marquardt@ndsu.edu</p>	<p>Upward Bound is administered by the NDSU TRIO Programs Office along with other programs such as Talent Search, Veterans Upward Bound, and McNair Scholars Program - all college access programs.</p>	
<p>BROADER IMPACTS @ OTHER UNIVERSITIES</p>				
<p>Other universities: Offices have been created at many institutions to help researchers design, implement, and evaluate their BI activities. A great example of this effort is the Broader Impacts Network at the University of Missouri (NSF award #MCB-1408736).</p>	<p>http://theconnector.missouri.edu/</p>			
<p>Other universities: University of Oklahoma</p>	<p>bir.ou.edu</p>			
<p>Other universities: University of Texas- Dallas</p>	<p>https://www.utdallas.edu/research/osp/faculty/broader_impacts/</p>			
<p>Other universities: University of Florida</p>	<p>http://www.research.ufl.edu/research-program-development/research_program_development_docs/Broader_Impacts.pdf</p>			
<p>Other universities: UMass Amherst</p>	<p>http://www.umass.edu/research/nsf-explains-broader-impacts</p>			
<p>Other universities: UMass Amherst</p>	<p>https://www.umass.edu/research/proposals/development-proposal/broader-impacts</p>			
<p>Other universities: University of Missouri</p>	<p>GRFP: 10 Strategies for Planning Broader Activities - http://grfpessayinsights.missouri.edu/broader-impacts.php</p>			
<p>Other universities: Iowa State University</p>	<p>http://www.spisu.iastate.edu/ and http://www.spisu.iastate.edu/programs/areas</p>			

Broader Impacts Toolbox from Stanford University	http://oso.stanford.edu/files/faculty-resources_4.pdf			
NATIONAL GUIDANCE				Comments
NSF GPG, Chapter III.A.1 - Merit Review Principles. NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These broader impacts may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or	https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_3.jsp#			NSF grant proposal requirements
NSF GPG, Chapter III.A.2 - The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes	https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_3.jsp#IIIA2b			NSF grant proposal requirements
NSF Perspectives on Broader Impacts	http://www.nsf.gov/od/ia/publications/Broader_Impacts.pdf			
Broader Impacts: Improving Society	http://www.nsf.gov/od/oia/special/broaderimpacts/			
NSF - Background on Broadening Participation	https://www.nsf.gov/od/broadeningparticipation/bp.jsp			
NSF Dear Colleague Letter: Stimulating Research Related to the Science of Broadening Participation - 4/7/2015	http://www.nsf.gov/pubs/2015/nsf15066/nsf15066.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click			
NSF Toolkit Highlights Impact of NSF Investments	https://www.nsf.gov/news/news_summ.jsp?cntn_id=131813			
2011 NSF report - see pp 21-23 and 25-26, discussion about assisting faculty with Broader Impacts requirement	NSF's Merit Review Criteria: Review and Revisions - http://www.nsf.gov/nsb/publications/2011/meritreviewcriteria.pdf			

<p>National Alliance for Broader Impacts (NABI): The goal of NABI is to create a community of practice that fosters the development of sustainable and scalable institutional capacity and engagement in broader impacts activity.</p>	<p>http://broaderimpacts.net/</p>			<p>A national network of universities, professional societies and informal science organizations.</p>
<p>NABI Guiding Principles Document - The National Association for Broader Impacts (NABI) Broader Impacts Working Group has developed a guiding document for the National Science Foundation's (NSF) broader impacts (BI) criterion.</p>	<p>http://broaderimpacts.net/wp-content/uploads/2015/12/nabi_guiding_principles-1.pdf</p>			
<p>Workshop for NABI Summit, by Michael Thompson, U. of Oklahoma (30 slides) 4/2016</p> <p>The Committee on Equal Opportunities in Science and Engineering (CEOSE) is a congressionally mandated advisory committee to the NSF.</p>	<p>http://bir.ou.edu/files/bir/docs/Broader_Impacts_TRUCEN.pdf</p> <p>See http://www.nsf.gov/od/oia/activities/ceose/ CEOSE Advisory Committee Colleague Letter; CEOSE 2013-2014 Report Summary; and CEOSE 2013-2014 Biennial Report</p>			
<p>National Academies Press: Identifying and Supporting Productive STEM Programs in Out-of-School Settings</p>	<p>contact ndsu.researchdev@nds.edu to request this publication.</p>			

<p>Do Broader Impacts need to be new and innovative, or can they build on proven programs and models?</p>				<p>NSF program officer guidance: The education, knowledge transfer and diversity activities should not be long lists of activities, but rather should be focused and integrated with the research activities. These activities should be a balance between existing/evidence-based practices and innovative plans, and should include formal evaluation.</p>
<p>HOW-TO INFORMATION:</p>				
<p><u>Broader Impact Wizard</u>: quick and easy five step process to help you develop a broader impact statement</p>	<p>http://coseenow.net/wizard/</p>			
<p><u>Broader Impacts 2.0</u>. In early 2013, COSEE-Florida sponsored a series of lunchtime seminars (Broader Impacts 2.0 Lunches) at six universities and research institutes throughout Florida.</p>	<p>http://www.cosee.net/resources/broadeningparticipation/index.cfm?FuseAction=ShowResourceDetails&ResourceID=614</p>			
<p><u>Broader Impacts Toolbox</u> from Stanford University</p>	<p>http://oso.stanford.edu/files/faculty-resources_4.pdf</p>			
<p><u>National Alliance for Broader Impacts</u>: The goal of NABI is to create a community of practice that fosters the development of sustainable and scalable institutional capacity and engagement in broader impacts activity.</p>	<p>http://broaderimpacts.net/</p>			

Campus Community Partnerships for Health	https://www.facebook.com/pages/Community-Campus-Partnerships-for-Health/215367077241?ref=stream&fref=nf			
Campus Community Partnerships for Health	Free guidebook, "Making Research Work in your Community: A Guidebook to Successful Research Partnerships" at https://cche.wisc.edu/making-research-work-in-your-community-a-guidebook-to-successful-research-partnerships/			
Campus Community Partnerships for Health	Also see https://ccph.memberclicks.net/network-for-research-equity			
Applying the NSF Broader Impacts Criterion to HCI (human computer interaction) Research	http://www.cs.grinnell.edu/~davisian/broader-impacts/slides.pdf			
Broader Impacts: Improving Society	http://www.nsf.gov/od/oia/special/broaderimpacts/			
Creating Visibility and Healthy Learning Environments for Native Americans in Higher Education, published by the American Indian College Fund, 2019	https://collegefund.org/wp-content/uploads/2019/02/Creating-Visibility-and-Healthy-Learning-Environments-for-Natives-in-Higher-Education_web.pdf?utm_medium=email&utm_source=PND%20Education%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=efw20190313_email			
"Integrating Research and Education: Moving Research Results into Geoscience Courses"	http://serc.carleton.edu/research_education/linkage.html			
COMMENTARY:				
NSF's "Broader Impact" Criterion Gets Mixed Reviews"	http://www.aps.org/publications/apsnews/200706/nsf.cfm			
"Science: for Science's or Society's Sake? Owning the National Science Foundation's Broader Impacts Criterion"	http://scienceprogress.org/2012/03/owning-the-national-science-foundation%E2%80%99s-broader-impacts-criterion/			
Broader Impacts R Us (FemaleScienceProfessor)	http://science-professor.blogspot.com/2009/11/broader-impacts-r-us.html			
"Doing Broader Impacts? The National Science Foundation (NSF) broader impacts criterion and communication-based activities" (a thesis)	http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4741&context=etdA thesis submitted by Sarah L. Wiley at Iowa State University, 2014			