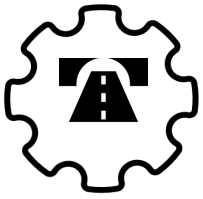
NATIONAL ACADEMY OF ENGINEERING

GRAND CHALLENGES OF ENGINEERING – The National Academy of Engineering, a national consortium of engineers, has identified fourteen issues that they see as the biggest engineering problems facing our world for the future. These Grand Challenges range from access to clean water to the threat of nuclear terror attacks and represent problems that are both significant and solvable by the next generation of engineers.

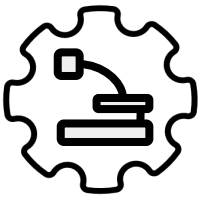
ADVANCE PERSONALIZED LEARNING - Instruction can be individualized based on learning styles, speeds, and interests to make learning more reliable.

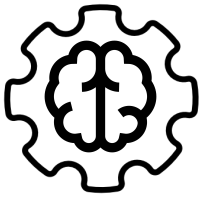
MAKE SOLAR ENERGY ECONOMICAL - Solar energy provides less than 1% of the world's total energy, but it has the potential to provide much, much more.



RESTORE & IMPROVE URBAN INFRASTRUCTURE - Good design and advanced materials can improve transportation and energy, water, and waste systems, and also create more sustainable urban environments.

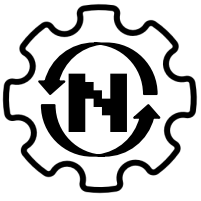
ENGINEER TOOLS FOR SCIENTIFIC DISCOVERY - In the century ahead, engineers will continue to be partners with scientists in the great quest for understanding many unanswered questions of nature.





REVERSE-ENGINEER THE BRAIN -The intersection of engineering and neuroscience promises great advances in health care, manufacturing, and communication.

MANAGE THE NITROGEN CYCLE - Engineers can help restore balance to the nitrogen cycle with better fertilization technologies and by capturing and recycling waste.



http://nasmith3stem.weebly.com/grand-challenges