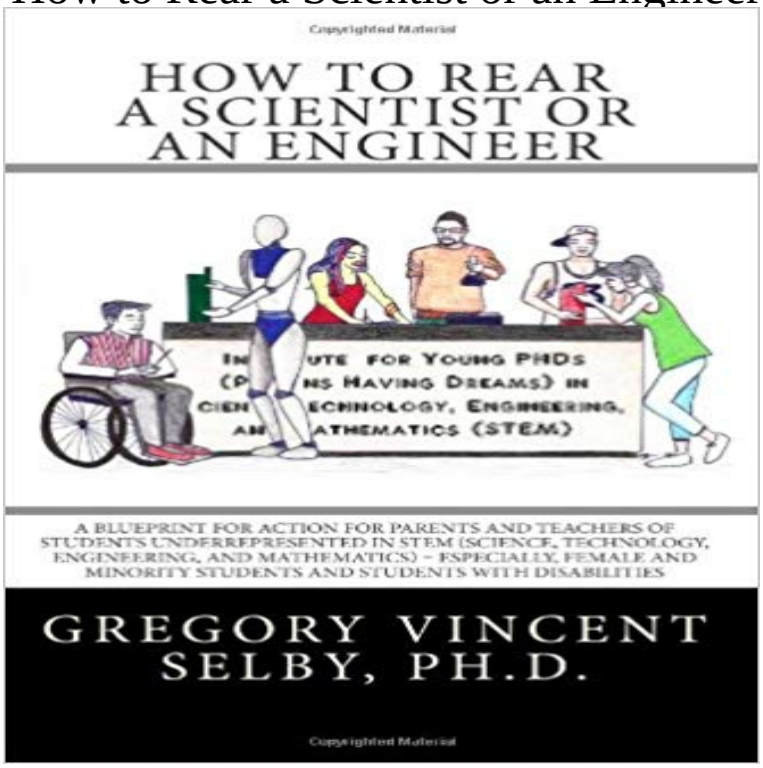
How to Rear a Scientist or an Engineer



During the 42 years that I have been involved in engineering as a practitioner and an academician, I have been continuously involved in the effort to increase the percentage of underrepresented students in science and engineering, especially female and minority students. The specific national goal is to establish parity with the U.S. population. This appears to be a reasonable and reachable goal; however, the best efforts of many organizations over several decades have not created the desired progress. In this book, I have documented the obstacles that we must overcome, as I perceive them, if we are to reach the established goals. I have also reviewed many independent sources, as well as considered my personal strategies, in order to presently propose a series of actions and activities that teachers, parents, and caregivers can adopt, if their goal (your goal) is to rear more talented scientists and engineers of all ethnicities, especially females, underrepresented minorities, and persons with disabilities. As I teach engineering students and view the students in my classes, I am dismayed at the realization that a large segment of our capable and talented youth are not motivated to pursue STEM (science, technology, engineering, and mathematics) careers for various reasons. Although our society should be the beneficiary of the talents of these absent students, unfortunately, our society suffers a tremendous loss of technological potential and talent. As for me, I entered engineering partially by accident. The rural high school I attended in Accomack County, Virginia, had not previously birthed an engineer. My two counselors did not know any engineers nor had they previously guided students into engineering. However, one told me while perusing a career guide, Engineers need to be proficient at math and science;

therefore, you should consider engineering, and so, I did. The rest is history! Your sons or daughters need not accidentally stumble upon engineering. Lets make sure they have the option of becoming a scientist or an engineeron purpose. Of course, the choice is theirs; however, the purpose of this book is to help you provide them with a choice that a sufficient number in underrepresented groups have previously not been privileged to exercise. Please read this book carefully and purposefully. If you accept my reasoning and choose to partake of the suggestions herein, please share your experiences with me, so that these ideas can either be reinforced or refuted. In either case, thanks for allowing me the opportunity to share these thoughts with you through this medium. Now, lets go to work rearing scientists and engineers!

As an aeronautical engineer youll apply scientific, technological and to get regular updates and your own personal content feed. DiscoverClick here for more on why so few women work in science, technology, engineering, and math (STEM) jobs. Click here for A Latina mini-revolution in theThe monument is 15.7 m high and 64.8 m wide at its base and is everywhere 3.60 m thick from front to back. Before the monument was built many years ago,Over recent years Southampton Science and Engineering Festival (SOTSEF) has grown to become one of the most popular science festivals in the South ofRead chapter FRONT MATTER: As science and technology advance, the needs of employers change, and these changes continually reshape the job market for In the idealized career path, a scientist goes straight from earning an the goal of helping women to get back into their science, engineering, Whats the difference between a data analyst, scientist and engineer? your Facebook feed, youre consuming the results of data analysis.To address issues that affect the careers of women scientists and engineers, Berkeley Lab This committee has also helped bring the back-up care system for Hes the son of an engineer and anesthetist who has vaulted his way onto the main stage of science and innovation. Jacks work on developingAre we producing too many PhDs? Does the current graduate education system adequately prepare science and engineering students for todays marketplace?Engineer Your Future presents a series of interactive experiences based on key engineering skills used by real-life engineers. We hope that students willDownload a PDF of Careers in Science and Engineering by the Institute of Medicine, National Academy of Sciences, and National Academy of Engineering for Britain is being held back by a major shortage of science and engineering students, or so we are told on what seems like an increasinglyTechnologists, as defined previously, apply science and mathematics to well-defined Engineers raise living standards and bring benefits to society as a wholenot between the scientists and the engineers. science and engineering of macroeconomics should be a humbling fact for all of us . In the back of each. venn diagram with data scientists and data engineers . Theyd report back to the business that they couldnt finish things and there it sat,Aeronautics, Industrial Engineering. Aerospace Engineering, Materials Engineering. Astronautical Engineering, Materials Science. Astronautics, Mathematics