

# Engineering makes a world of difference and is essential to our health, happiness & safety

1. Read through the matrix of engineering jobs below, and categorize whether the role addresses our health, happiness, or safety. Each job may have applications for more than one category. Keep a tally in the empty boxes provided at the bottom.
2. Draw a star in the boxes with engineering jobs that involve Creativity and Collaboration.

Engineering Job Descriptions (From Science Buddies. Find more @ <a href="http://bit.ly/Science_Careers">bit.ly/Science_Careers</a> )			
<p><b>Nanosystems Engineer</b> Create tiny particles that can move around a patient's body, finding and killing cancer cells.</p> <p>Health *</p>	<p><b>Nanosystems Engineer</b> Use nanotechnology to create a new generation of smaller, longer-lasting, more eco-friendly batteries.</p>	<p><b>Aerospace Engineer</b> Build satellites that help us monitor global climate changes from space.</p>	<p><b>Aerospace Engineer</b> Design airplane wings that change shape to enhance maneuverability.</p>
<p><b>Chemical Engineer</b> Find a way to turn recycled plastic bottles into high-end fabrics.</p>	<p><b>Chemical Engineer</b> Develop new fuels to propel the next generation of spacecraft farther and faster.</p>	<p><b>Civil Engineer</b> Design a building that can survive a major earthquake without damage.</p>	<p><b>Civil Engineer</b> Build a dam to provide a source of hydroelectric power.</p>
<p><b>Civil Engineer</b> Design water-treatment facilities to reduce water pollution and provide clean drinking water.</p>	<p><b>Electrical Engineer</b> Design a remote-controlled toy race car.</p>	<p><b>Electrical Engineer</b> Devise a reliable radio collar so that researchers can track and study wild animals.</p>	<p><b>Environmental Engineer</b> Design the structure and irrigation for rooftop gardens, helping reduce building heating and cooling costs.</p>
<p><b>Environmental Engineer</b> Design an ocean-water desalination plant to help irrigate crops without harming marine life.</p>	<p><b>Industrial Engineer</b> Reconfigure airport check-in services to shorten lines and make passengers happier.</p>	<p><b>Industrial Engineer</b> Streamline an operating room so that it is safer, faster, and easier to use.</p>	<p><b>Industrial Engineer</b> Determine the fastest way to transport perishable goods cross-country, even during bad weather.</p>
<p><b>Mechanical Engineer</b> Design a safety harness for an upside-down amusement park ride.</p>	<p><b>Mechanical Engineer</b> Design surgical robots that improve precision and reduce incision size, blood loss, pain, and healing time.</p>	<p><b>Mechanical Engineer</b> Design carbon fiber prosthetic blades for high-speed running.</p>	<p><b>Nuclear Engineer</b> Design X-ray and MRI machines, as well as PET scanners, to help diagnose illness or disease.</p>
<p><b>Nuclear Engineer</b> Simulate nuclear reactions on a computer to avoid the hazards and expense of physical experiments.</p>	<p><b>Petroleum Engineer</b> Determine what type of drilling fluid will prevent drilling tool damage and prevent "blowouts"—uncontrolled gushing of oil.</p>	<p><b>Electrical Engineer</b> Design the imaging technology to make portable ultrasound technology possible, in order to take the machine to the ill patient's home.</p>	<p><b>Electrical Engineer</b> Design the next generation of the smart phone.</p>
<p><u>Health</u></p> <p>/</p>	<p><u>Happiness</u></p>	<p><u>Safety</u></p>	