Engineering: Technologies Today

Part of being a good engineer is to know what is going on in the surrounding world. Political, social, economic and natural events usually dictate the need for scientific and technological innovation. When problems arise, the world turns to scientists and engineers to develop and implement effective solutions to the problems.

Not only do engineers need to keep up to date to know the problems, but also to know the solutions. One of the first things that a good engineer will do to solve a problem is to see if it has been solved before by researching and communicating with fellow engineers. Why reinvent the wheel if you don't have to? If the engineer cannot find a preexisting answer then he or she will set up an experiment to try to find a solution.

Throughout the year, you are going to explore some of the advances in science and technology that are happening right now. Let's pretend that you have just been hired as an engineer at a company that works in one of the areas listed on the next page. To keep the company up to speed with the rest of the world, your manager requires that all employees track and share engineering news. Your manager requires you to submit a 1 page memo on the last business day of each month detailing an engineering problem, scientific discovery or technological advancement relating to your field.

Make sure that you cover these topics in paragraph form – don't just give a list of answers. Attached is a template that you should follow. You may use any accredited news source or professional journal as long it is cited and a copy is attached to your memo. On the following page is a list of possible areas that your company works in. Choose an area that you find interesting because you will be tracking it for the rest of the school year.

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This list is not exclusive – if there is a topic you would like to track you are encouraged to pursue it as long as you have it approved by your teacher.

1. AIDS research
2. Aviation
3. Alternative energy
4. Asteroids
5. Automotive technology
6. Biomedical engineering
7. Bridges
8. Buildings
9. Cancer research
10. Cellular communication
11. Cloning
12. Computer Hardware
13. Computer software
14. Diabetes research
15. Environmental engineering
16. Fiber optic communication
17. Fluid control (floods, rivers, dams, etc)
18. Genetic engineering
19. International space station
20. Internet
21. Marine technology
22. Mars exploration
23. Media technology
24. Medical imaging
25. Medication & drugs
26. MEMS (micro electromechanical systems)
27. Microelectronics
28. Military & defense
29. Nanotechnology
30. Nuclear energy
31. Pharmacology
32. Photonics
33. Rail and ground transportation
34. Renewable energy
35. Satellite communication
36. Space exploration
37. Space shuttle
38. Stem cell research
39. Technology and terrorism
40. Video & Imaging
41. Weather tracking
42. Wireless communication