Instead of a Lecture on Scientific and Technological Developments (1950–2000)

I. Proposition: The awards and accolades do not always go to the best and the brightest or most deserving.

II. Cases

A. Discovery of the structure of DNA (deoxyribonucleic acid)
1. Early history
a. Gregor Mendel (1822–1884)
b. F. Meischer – extraction and description of nuclein (1869)
2. Personages important for the discovery of its structure
a. Erwin Chargaff (1905–1992), relationship of A, T, G, and C
–Adenine, Thymine, Guanine, and Cytosine
b. Alfred Hersey (1908–1997) and Martha Chase (1930–)
c. Linus Pauling (1901–1994)
d Rosalind Franklin (1920–1958)
e. Maurice Wilkins (1916–)
f. James Watson (1928–)
g. Francis Crick (1916–)

B. Space Exploration
1. Soviet Space Program
a. Sergei Pavlovich Korolev (1907–1966), Chief Designer
(1) first satellite to orbit the Earth (October 4, 1957), *Sputnik 1*
(2) first animal to orbit the Earth (November 3, 1957), *Sputnik 2*
(3) first probe to hit the Moon (September 15, 1959), *Luna 2*
(4) first photos from far side of moon (October 4, 1959), *Luna 3*
(5) first man to orbit the Earth (April 12, 1961), *Vostok 1*
(6) first woman to orbit the Earth (June 16, 1963), *Vostok 6*
(7) first space walk (March 18, 1965), *Voskhod 2*
(8) first spacecraft to impact another planet (Venus), March 1, 1966
b. Laika
c. Yurii Gagarin
d. Valentina Tereshkova
e. Aleksei Leonov
2. U.S. Space Program
a. Wernher von Braun (1912–1977)
(1) first U.S. satellite to orbit the Earth (January 1, 1958) *Explorer 1*
(2) U.S. chimpanzee, Ham, on suborbital flight (January 1961)
(3) first U.S. man to orbit the Earth (February 20, 1962)*, Mercuary-Atlas 6*
(4) first man on the Moon (July 16, 1969) *Apollo 11*

b. John Glenn
c. Neil Armstrong
d. National Aeronautics and Space Administration (NASA) created (Oct. 1, 1958)
e. Challenger Shuttle Disaster (January 28, 1986)
(1) Richard Feynman (1918–1988)
(2) O-ring ice-water demonstration

C. Computers
1. Mainframes
a. Mark I (1941)
b. Mark II (1945)
c. ENIAC (Electronic Numerical Integrator and Computer), patented 1947
d BINAC (1950)
e. UNIVAC (Universal Automatic Computer) (1951)
(1) COBOL
(2) program developed by Grace Hopper (1906–1992)
g. Cray-1 (1976) – 160 megaflops/sec.
h. Cray-2 (1985) – 1.6 gigaflops/sec.
i. Cray-3 (1988) – 2.3 gigaflops/sec.
2. Personal Computers (PCs)
a. Altair 8800 (1975)
b. Apple I (1976)
(1) Steve Jobs
(2) Steve Wozniak
c. Apple II (1977)
d. Commodore VIC-20 (1980)
e. IBM PC (introduced August 12, 1981)
f. Compaq
g. Apple MacIntosh (1984)
3. Operating Systems
a. CP/M (Control Program for Microprocessors)(1973)
(1) Gary Kildall (1942–1994)
(2) Intergalactic Digital Research
b. QDOS (Quick and Dirty Operating System)(1980)
(1) Tim Patterson
c. MSDOS (Microsoft Disc Operating System) (1981)
d. Windows (1985)
4. Programs for PCs
a. VisiCalc, first spreadsheet (1978)
b. Lotus 1-2-3 (1982)

D. Quantum Physics: The World of Sub-Atomic Particles
1. Hadrons, Baryons, Mesons, Leptons, and Muons
2. Quarks
a. Murray Gell-Mann (1929–)

DNA: an extremely long, double-stranded nucleic acid molecule arranged as a double helix that is the main constituent of the chromosome and that carries the genes as segments along its strands; found chiefly in the chromatin of cells and in many viruses (1930–1935)