

# Unit Two - Law and Order

## Pioneers in Medicine

- Without medical pioneers, there would be no medical advances, no technology evolution, no progress at all.
- Students will research and prepare a poster and short presentation of modern medical innovators and innovations. Make a correlation between the medical field advances and your own lives when possible.
- Select a person(s) that is of interest to you. Think about a modern pioneer that you would love to work beside. If you choose more than one person, their pioneering efforts should be related to each other.
- Internet Resources:
  - <http://www.accessexcellence.org/AE/AEC/CC/>
  - <http://www.nobel.se/medicine/laureates/index.html>
  - [http://www.invent.org/hall\\_of\\_fame/1\\_1\\_search.asp](http://www.invent.org/hall_of_fame/1_1_search.asp)
- Possible Pioneers in Medicine:
  - Lady Mary Wortley Montague – smallpox immunization
  - Edward Jenner – smallpox immunization
  - Ignaz Semmelweis – aseptic technique (hand washing)
  - Louis Pasteur – pasteurization/rabies immunization
  - Robert Koch – germ therapy
  - Rudolf Virchow – tuberculosis care
  - Paul Ehrlich – diphtheria, chemicals to fight disease, anesthesia
  - Alexander Fleming – discovered penicillin
  - Joseph Lister – aseptic technique in surgery
  - Madame Marie Curie – use of radium, leading to cancer treatments
  - Jane Addams – America's first social worker
  - Dorothea Dix – treatment of mentally ill
  - Elizabeth Blackwell – first woman doctor in America
  - Clara Barton – Civil War nurse, developed Red Cross
  - William Harvey – discovered circulatory system
  - Anthon van Leeuwenhook – invented the microscope
  - Rene' Laennec – invented the stethoscope
  - Florence Nightingale – founded modern nursing; first school of nursing
  - William Roentgen – discovered x-rays
  - Phillip Pinel – freed mentally ill from chains
  - Sigmund Freud – studied effects of unconscious mind on the body
  - Jonas Salk – polio immunization
  - Alfred Sabin – polio immunization

**Health Occupations Professional Essentials**

- Fredrick Banting – discovered insulin
- Charles Best – discovered insulin
- Thomas Bond – opened first hospital in America
- William Shippen, Jr. – taught anatomy in Philadelphia
- William Beaumont – Army surgeon; studied action of stomach in wounded soldier
- Ephraim McDowell – removed potentially fatal ovarian tumor
- Walter Reed – studied yellow fever, aided in building of Panama Canal
- Theobald Smith – laid foundation for prevention of diseases
- Alexis Carrell – studied several arteries and transplantation of organs
- Elizabeth Garrett Anderson – first female doctor in Britain
- Aletta Jacobs – first female doctor in Holland, opened first birth control clinic
- Elsie Strang L'Esperance – established clinic for cancer prevention which included work by Dr. Papanicolaou
- Dr. Papanicolaou – pap smear
- Dorothy Hansine Anderson – celiac disease, wrote on chemotherapy treatment
- Dorothy Hodgkins – pernicious anemia
- Elie Metchnikoff – white blood cells protect against diseases
- Alexa Canady – neurosurgeon
- M. Deborah Hyde-Rowan – neurosurgeon
- Christian Barnard – heart surgeon/transplants
- Harry Heimlich – Heimlich maneuver
- Michael DeBakey – heart surgeon/transplants
- Denton Cooley – heart surgeon
- William DeVries – first artificial heart (Jarvik-7)
- Francis Crick & James Watson – structure of DNA
- Hippocrates – Father of Medicine