



# Health Science Career Cluster

## Cluster Overview

**Cluster Description:** This cluster orients students to careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some of the careers involve working directly with people, while others involve research into diseases or collecting and formatting data and information. Work locations are varied and may be in hospitals, medical or dental offices or laboratories, cruise ships, medivac units, sports arenas, space centers, or within the community.

**Employment Outlook:** Health care is the largest and fastest-growing industry in the United States. The health care industry employs over 10 million workers in more than 200 careers. The current and projected health care workforce shortage is creating a health care crisis across the nation. Health care employment growth between 2000-2010 is projected to be 25.5 percent. The explosion of technology in health care and an unprecedented aging population contribute to the national health care workforce shortage.

Communication  
Information Systems

Foundation  
Knowledge and Skills

and Technical Literacy

Ability • Ethics • Systems  
Work • Career Development  
Solving • Critical Thinking  
Application  
Responsibilities • Communication  
Health, and Environment

Services and  
Resources

Industrial, Manufacturing,  
and Engineering Systems

Health Sciences

Health Science

Biotechnology Research  
and Development

Biomedical Engineer  
Lab Technician  
Medical Scientist  
Quality Assurance Technician  
Quality Control Technician

Diagnostic Services

Cardiovascular Technologist  
Exercise Physiologist  
Medical Technologist  
Nuclear Medicine Technologist  
Radiologic Technologist

Health Informatics

Data Analyst  
Health Care Administrator  
Health Information Coder  
Health Service Manager  
Medical Records Technician

Support Services

Biomedical Engineer  
Dietary Technician  
Facilities Manager  
Food Service  
Hospital Maintenance Engineer

Therapeutic Services

Dental Hygienist/Assistant  
Dietician  
Home Health Aides  
Fitness Trainer  
Surgical Technician

Career Pathway

Career Specialties

## Pathway Descriptions

### Biotechnology

**Development** workers study diseases to discover new treatments or invent medical devices used to directly assist patients or to improve the accuracy of diagnostic tests.

**Diagnostic Services** workers use tests and evaluations that aid in the detection, diagnosis and treatment of diseases, injuries or other physical conditions.

**Health Informatics** workers occupy many different levels of health care related employment. This pathway includes health care administrators who manage health care agencies as well as those individuals who are responsible for managing all of the patient data and information, financial information, and computer applications related to health care processes and procedures.

**Support Services** workers provide a therapeutic environment for the delivery of health care. Support Services offers a full range of career opportunities from entry level to management, including technical and professional careers.

**Therapeutic Services** workers are focused primarily on changing the health status of the patient over time. Health professionals in this pathway work directly with patients; they may provide care, treatment, counseling and health education information.

## Cluster Facts

- There are 4,148 apprentices employed and training in Health Science professions across the country, ranging from Certified Nursing Assistants and Licensed Practical Nurses to Surgical Technologist and Emergency Medical Technicians.
- Job Corps provides training in 12 Health Science-related careers, including nursing, with 105 of its 118 centers providing Health Science-related career training.
- The Health Science industry is predicted to add 3.5 million new jobs between 2002 and 2012, an increase of 30%.
- The majority of Health Science occupations require less than four years of college education, but health diagnosing and treating practitioners are among the most educated workers.

### Related 4-H Projects

- ◆ Cat
- ◆ Dog
- ◆ Health
- ◆ Human Development
- ◆ Lifetime Sports
- ◆ Physical Fitness
- ◆ Rabbit
- ◆ Vet Science
- ◆ Companion Animal
- ◆ Food and Nutrition
- ◆ Horse
- ◆ Safety