# What Can I Do with a Degree in ...

# **CHEMISTRY**



**Chemist** 



College Chemistry
Teacher



**Natural Sciences Manager** 



Environmental Science and Protection Technician



**Medical Scientist** 



**Biochemist and Biophysicist** 



High School Teacher



### CHEMIST

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#### Requirements and Responsibilities for Chemist I

Evaluates the chemical and physical properties of various organic and inorganic substances in order to investigate their applications to medicine and other industries. Requires a bachelor's degree and 0-2 years of experience in the field or in a related area. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

Source: Salary.com, 2014

#### Job Requirements

**Experience:** A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

**Education:** Most of these occupations require a four - year bachelor's degree, but some do not.

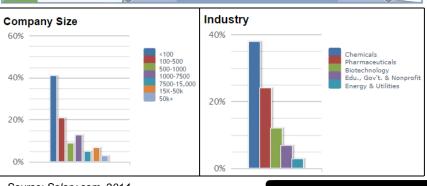
Training: Employees in these occupations usually need several years of workrelated experience, on-the-job training, and/or vocational training.

Source: MyPlan.com, 2014

Quick Facts: Chemists and Materials Scientists	
2012 Median Pay	\$73,060 per year \$35.13 per hour
Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2012	96,200
Job Outlook, 2012-22	6% (Slower than average)
Employment Change, 2012-22	5,400

Source: Bureau of Labor Statistics, 2012





Source: Salary.com, 2014

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Source: MyPlan.com, 2014

The median annual wage for chemists was \$71,770 in May 2012. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$41,080, and the top 10 percent earned more than \$120,600.

In May 2012, the median annual wages for chemists in the top five industries employing these scientists were as follows:

Federal government, excluding postal service	\$100,920
Research and development in the physical, engineering, and life	
sciences	79,140
Pharmaceutical and medicine	
manufacturing	70,480
State and local government, excluding	
education and hospitals	57,190
Testing laboratories	55,060

Source: Bureau of Labor Statistics, 2012

#### **Top 5 Skills**

Science — Using scientific rules and methods to solve problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

#### **Top 5 Abilities**

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

**Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

**Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Near Vision — The ability to see details at close range (within a few feet of the observer).

Written Comprehension - The ability to read and understand information and ideas presented in writing.

## COLLEGE CHEMISTRY **TEACHER**

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Requirements and Responsibilities For Instructor - Chemistry

Conducts college-level courses in the field of chemistry. Areas of instruction include organic and inorganic chemistry, chemical analysis, and chemical reactions. Responsible for preparing and delivering lectures, leading and moderating classroom discussions, and administering and grading examinations. Requires a bachelor's/master's degree in area of specialty and 2-4 years of experience in the field or in a related area. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A certain degree of creativity and latitude is expected. Typically reports to a department head.

Source: Salary.com, 2014

#### **Job Requirements**

Experience: Extensive skill, knowledge, and experience are needed for these occupations. Many require more than five years of experience. For example, surgeons must complete four years of college and an additional five to seven years of specialized medical training to be able to do their job.

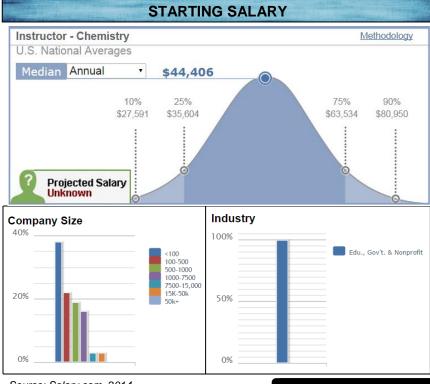
Education: A bachelor's degree is the minimum formal education required for these occupations. However, many also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D.

Training: Employees may need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Source: MyPlan.com, 2014

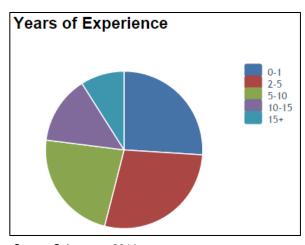
Quick Facts: Postsecondary Teachers	
2012 Median Pay	\$68,970 per year
Entry-Level Education	Doctoral degree
Work Experience in a Related Occupation	Postdoctoral research experience
On-the-job Training	None
Number of Jobs, 2012	1,267,700
Job Outlook, 2012-22	19% (Faster than average)
Employment Change, 2012-22	236,400

Source: Bureau of Labor Statistics, 2012

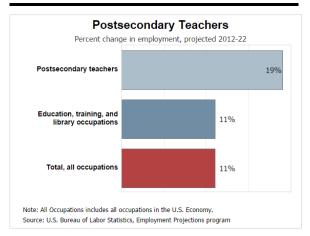


Source: Salary.com, 2014

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Source: Salary.com, 2014



Source: Bureau of Labor Statistics, 2012

#### **Top 5 Skills**

Speaking — Talking to others to convey information effectively.

**Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Science — Using scientific rules and methods to solve problems.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

#### **Top 5 Abilities**

Oral Expression — The ability to communicate information and ideas in speaking so others will

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

**Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

**Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense.

**Written Expression** — The ability to communicate information and ideas in writing so others will understand.

# ENVIRONMENTAL SCIENCE TECHNICIAN

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# Requirements and Responsibilities For Environmental Planner I

Plans, prepares, and monitors environmental research and evaluates potential impact of assigned projects. Ensures environmental projects are in compliance with the state and federal regulations. Estimate the level of pollutants involving air, land, and water to devise mitigating measures. Requires a bachelor's degree in area of specialty and 0-3 years of experience in the field or in a related area. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Typically reports to a supervisor.

Source: Salary.com, 2014

#### **Job Requirements**

**Experience:** A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

**Education:** Most of these occupations require a four - year bachelor's degree, but some do not.

**Training:** Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

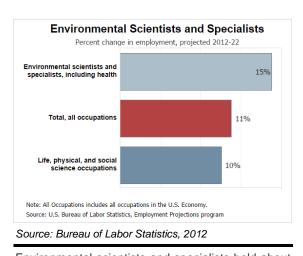
Source: MyPlan.com, 2014

Quick Facts: Environmental Scientists and Specialists	
2012 Median Pay	\$63,570 per year \$30.56 per hour
Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2012	90,000
Job Outlook, 2012-22	15% (Faster than average)
Employment Change, 2012-22	13,200

Source: Bureau of Labor Statistics, 2012

#### STARTING SALARY **Environmental Planner I** Methodology U.S. National Averages Median Annual \$55,088 10% 75% 90% 25% \$41,690 \$48,075 \$64,200 \$72,496 Projected Salary Unknown Company Size Industry 60% 100-500 500-1000 nergy & Utilities usiness Services 40% 500-15,000 15K-50k 25% 20% 0%

Source: Salary.com, 2014



Environmental scientists and specialists held about 90,000 jobs in 2012. Most environmental scientists and specialists work for federal, state, or local governments or private consulting firms that may work with government or private industry.

The industries that employed the most environmental scientists and specialists in 2012 were as follows:

State government, excluding education and hospitals	22%
Management, scientific, and technical consulting services	21
Local government, excluding education and hospitals	14
Engineering services	10
Federal government, excluding postal service	7

Source: Bureau of Labor Statistics, 2012

#### Top 5 Skills

**Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.

**Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

**Writing** — Communicating effectively in writing as appropriate for the needs of the audience.

**Speaking** — Talking to others to convey information effectively.

Critical Thinking — Using logic and reasoning to

#### **Top 5 Abilities**

**Written Comprehension** — The ability to read and understand information and ideas presented in writing.

**Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences.

**Oral Expression** — The ability to communicate information and ideas in speaking so others will understand.

**Written Expression** — The ability to communicate information and ideas in writing so others will understand.

**Near Vision** — The ability to see details at close range (within a few feet of the observer).

# HIGH SCHOOL TEACHER

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#### Requirements and Responsibilities For Public School Teacher

Prepares lesson plans and instructs students in an assigned school. Evaluates and monitors student's performance. Requires a bachelor's degree, 2-4 years of experience in the field or in a related area, and may require certification. Familiar with a variety of concepts, practices, and procedures within a particular field. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. Typically reports to the principal.

Source: Salary.com, 2014

#### **Job Requirements**

**Experience:** A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

**Education:** Most of these occupations require a four - year bachelor's degree, but some do not.

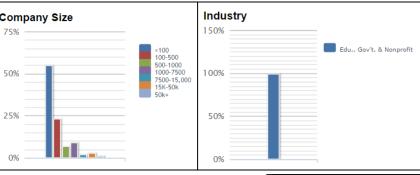
**Training:** Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Source: MyPlan.com, 2014

Quick Facts: High School Teachers	
\$55,050 per year	
Bachelor's degree	
None	
Internship/residency	
955,800	
6% (Slower than average)	
52,900	

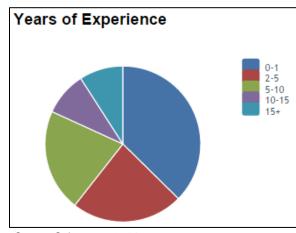
Source: Bureau of Labor Statistics, 2012



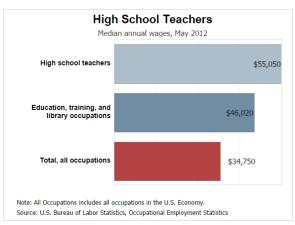


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Source: Salary.com, 2014



Source: Salary.com, 2014



Source: Bureau of Labor Statistics, 2012

#### Top 5 Skills

**Learning Strategies** — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

**Instructing** — Teaching others how to describing.

**Speaking** — Talking to others to convey information effectively.

**Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

**Coordination** — Adjusting actions in relation to others' actions.

#### **Top 5 Abilities**

**Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences.

**Oral Expression** — The ability to communicate information and ideas in speaking so others will understand.

**Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense.

**Speech Recognition** — The ability to identify and understand the speech of another person.

**Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### **BIOCHEMIST**

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#### Requirements and Responsibilities For Scientist I - Biotech

Performs a variety of laboratory procedures using established synthetic methods and techniques under general guidance. Conducts experiments, some moderately complex. Conducts and interprets routine spectroscopic data (i.e., NMR and IR). Requires a Ph.D in area of specialty and 0-2 years of experience in the field or in a related area. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Typically reports to a supervisor or manager.

Source: Salary.com, 2014

#### Job Requirements

**Experience:** Extensive skill, knowledge, and experience are needed for these occupations. Many require more than five years of experience. For example, surgeons must complete four years of college and an additional five to seven years of specialized medical training to be able to do their job.

**Education:** A bachelor's degree is the minimum formal education required for these occupations. However, many also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

**Training:** Employees may need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Source: MyPlan.com, 2014

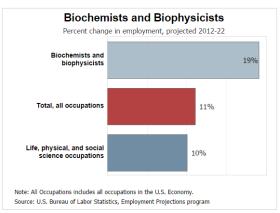
Quick Facts: Biochemists and Biophysicists	
2012 Median Pay	\$81,480 per year \$39.17 per hour
Entry-Level Education	Doctoral or professional degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2012	29,200
Job Outlook, 2012-22	19% (Faster than average)
Employment Change, 2012-22	5,400

Source: Bureau of Labor Statistics, 2012



Source: Salary.com, 2014

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Source: Bureau of Labor Statistics, 2012

The median annual wage for biochemists and biophysicists was \$81,480 in May 2012. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$41,430, and the top 10 percent earned more than \$147,350.

In May 2012, the median annual wages for biochemists and biophysicists in the top five industries in which these scientists worked were as follows:

Drugs and druggists' sundries merchant wholesalers	\$103,390
Research and development in the physical, engineering,	00 500
and life sciences	86,530
Pharmaceutical and medicine	
manufacturing	82,490
Testing laboratories	74,230
Colleges, universities, and	
professional schools; state,	
local, and private	52,990

Source: Bureau of Labor Statistics, 2012

#### **Top 5 Skills**

**Science** — Using scientific rules and methods to solve problems.

**Writing** — Communicating effectively in writing as appropriate for the needs of the audience.

**Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

**Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.

**Judgment and Decision Making** — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

#### **Top 5 Abilities**

**Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

**Written Expression** — The ability to communicate information and ideas in writing so others will understand.

**Information Ordering** — The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

**Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make

**Category Flexibility** — The ability to generate or use different sets of rules for combining or grouping things in different ways.

# **MEDICAL SCIENTIST**

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#### Requirements & Responsibilities: Scientist - Clinical Research

Assumes lead role in various clinical research projects. Proposes, plans, organizes and executes experiments and research. Secures grants and funding for research and is responsible for controlling budgets. Summarizes findings in reports and communicates results. Interacts with other scientists within and outside of the organization. Requires a Ph.D. in area of specialty and 3-5 years of experience. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to head of a unit/department.

Source: Salary.com, 2014

#### **Job Requirements**

Experience: Extensive skill, knowledge, and experience are needed for these occupations. Many require more than five years of experience. For example, surgeons must complete four years of college and an additional five to seven years of specialized medical training to be able to do their job.

Education: A bachelor's degree is the minimum formal education required for these occupations. However, many also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D.

Training: Employees may need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Source: MyPlan.com, 2014

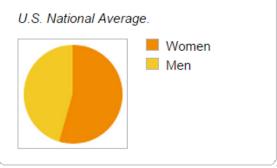
Quick Facts: Medical Scientists	
2012 Median Pay	\$76,980 per year \$37.01 per hour
Entry-Level Education	Doctoral or professional degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2012	103,100
Job Outlook, 2012-22	13% (As fast as average)
Employment Change, 2012-22	13,700

Source: Bureau of Labor Statistics, 2012



Source: Salary.com, 2014





Source: MyPlan.com, 2014

The median annual wage for medical scientists was \$76,980 in May 2012. The median wage is the wage at which half the workers in an occupation earned that amount and half earned less. The lowest 10 percent earned less than \$41,340, and the top 10 percent earned more than \$146,650.

In May 2012, the median annual wages for medical scientists in the top five industries employing these scientists were as follows:

Pharmaceutical and medicine manufacturing	\$92,940
Research and development in the physical, engineering,	
and life sciences	87,620
Offices of physicians	77,180
General medical and surgical hospitals; private	71,840
Colleges, universities, and professional schools; state	53,740

Source: Bureau of Labor Statistics, 2012

#### Top 5 Skills

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Speaking — Talking to others to convey information effectively.

#### **Top 5 Abilities**

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

Written Comprehension — The ability to read and understand information and ideas presented in writing.

Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Oral Expression — The ability to communicate information and ideas in speaking so others will

**Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make

## NATURAL SCIENCE MANAGER

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#### Requirements and Responsibilities For Research and **Development Director**

Directs and implements an organization's research and development policies, objectives, and initiatives. Ensures research and development activities will maintain an organization's competitive position and profitability. Requires a bachelor's degree with at least 10 years of experience in the field. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Leads and directs the work of others. A wide degree of creativity and latitude is expected. Typically reports to top management.

Source: Salary.com, 2014

#### **Job Requirements**

Experience: Extensive skill, knowledge, and experience are needed for these occupations. Many require more than five years of experience. For example, surgeons must complete four years of college and an additional five to seven years of specialized medical training to be able to do their job.

Education: A bachelor's degree is the minimum formal education required for these occupations. However, many also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

Training: Employees may need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

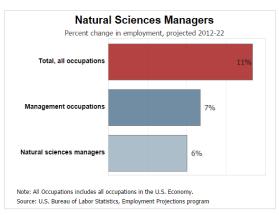
Source: MyPlan.com, 2014

Quick Facts: Natural Sciences Managers	
2012 Median Pay	\$115,730 per year \$55.64 per hour
Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	5 years or more
On-the-job Training	None
Number of Jobs, 2012	51,600
Job Outlook, 2012-22	6% (Slower than average)
Employment Change, 2012-22	2,900

Source: Bureau of Labor Statistics, 2012







Source: Bureau of Labor Statistics, 2012

The median annual wage for natural sciences managers was \$115,730 in May 2012. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$65,040, and the top 10 percent earned more than \$187,200.

In May 2012, the median annual wages for natural sciences managers in the top five industries in which these managers worked were as follows:

Research and development in the physical, engineering, and life sciences	\$155,560
Pharmaceutical and medicine manufacturing	116,800
Federal government, excluding postal service	107,210
Colleges, universities, and professional schools; state, local, and private	81,340
State government, excluding education and hospitals	73,080
	physical, engineering, and life sciences  Pharmaceutical and medicine manufacturing  Federal government, excluding postal service  Colleges, universities, and professional schools; state, local, and private  State government, excluding

Source: Bureau of Labor Statistics, 2012

#### Top 5 Skills

**Speaking** — Talking to others to convey information effectively.

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

#### **Top 5 Abilities**

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

Oral Expression — The ability to communicate information and ideas in speaking so others will understand.

Written Comprehension — The ability to read and understand information and ideas presented in writing.

**Speech Clarity** — The ability to speak clearly so others can understand you.

Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).