

# *Career Explorations*

INTEGRATED  
CURRICULUM UNIT ON  
HEALTH SCIENCE  
CAREERS

UNIT  
OVERVIEW





# Career Explorations

## CONTENTS

	Page
<b>Unit Overview</b>	<b>1</b>
<b>Subunit 1 Overview</b>	
Lesson 1.1 <b>Health Science</b>	
Lesson 1.2 <b>Algebra I</b>	
Lesson 1.3 <b>Algebra I</b>	
Lesson 1.4 <b>English Language Arts</b>	
<b>Subunit 2 Overview</b>	
Lesson 2.1 <b>Health Science</b>	
Lesson 2.2 <b>English Language Arts</b>	
Lesson 2.3 <b>English Language Arts</b>	
Lesson 2.4 <b>World History or English Language Arts</b>	
<b>Subunit 3 Overview</b>	
Lesson 3.1 <b>Algebra I</b>	
Lesson 3.2 <b>English Language Arts</b>	
Lesson 3.3 <b>English Language Arts</b>	
<b>A Growth Industry</b>	<b>3</b>
<i>The Hidden Infrastructure: Jobs in Health Science</i> . . . . .	5
<i>Demand: Our Growing and Aging Population</i> . . . . .	11
<i>Supply: The Problem in the Pipeline</i> . . . . .	27
<i>Writing a Research Paper: Overview</i> . . . . .	31
<b>Taking a Closer Look</b>	<b>39</b>
<i>Know Yourself</i> . . . . .	41
<i>Writing a Research Paper: Introduction to Research</i> . . . . .	47
<i>Writing a Research Paper: Organizing Information</i> . . . . .	51
<i>Biomedical Visionaries and Advances in Health Science</i> . . . . .	59
<b>Finding a Good Match</b>	<b>75</b>
<i>Comparing Salary and Education</i> . . . . .	77
<i>Writing a Research Paper: Writing Process</i> . . . . .	83
<i>Writing a Research Paper: Citations</i> . . . . .	89

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# Career Explorations

## UNIT OVERVIEW

### **Essential Question for This Unit**

What is the place for me in the health and biomedical sciences?

### **Unit Summary**

In this unit, students will investigate the varied career opportunities available within the health and biomedical sciences. They will conduct research on possible career paths and investigate the skills needed for each one. This unit will also give students an opportunity to learn about typical activities in various jobs and help them identify potential careers that match their interests, strengths, and goals. In addition, students will explore the broader social and economic impact of their career choices, while reviewing the historical origins of various health-related careers and their significance to the welfare of humankind.

In Subunit 1, students will be introduced to the field of health and biomedical sciences through a survey of the many, often hidden, careers that exist within this industry sector. They will investigate the field's future prospects by analyzing society's growing demand for biomedical research and healthcare services. In one lesson, students will construct pyramid graphs to illustrate current and past population data for the United States. They will also calculate a population growth model and make projections to the year 2050. Next, students will compare projected demand for health and biomedical science workers with current supply. Subunit 1 will conclude with an introduction to the research process that continues throughout the unit.

In Subunit 2, students will identify and investigate several careers that interest them. They will begin by conducting a self-analysis of their interests, skills, strengths, and weaknesses. Using a variety of career resources, students will then identify individual careers and/or career sectors that match their interests and compile detailed information about these careers. In this subunit, students will also learn about many influential biomedical researchers and healthcare visionaries and the impact of their discoveries and contributions to science and society.

In Subunit 3, after concluding their research, students will analyze the benefits and drawbacks of their career choices. This comparison will include an analysis of projected earnings compared with financial and time outlays for education and training. Students will report on their work in a formal research paper and present their findings to their peers in an oral presentation.

### **Culminating Event**

Several culminating events are appropriate for this unit. For example, students could hold a job fair for the school to share what they have learned about conducting education and career planning and about health and biomedical sciences career opportunities. Another possibility would be to have students summarize their research in one-page, career-specific informational pamphlets and compile a class resource binder for future students to use. Students could also be encouraged to make a personal connection with a professional in the career of their choice, do a "job shadow" or interview, and write-up results of their experience. Alternatively, the unit's research paper on a historical medical figure could lead to a series of presentations that would serve as the culminating event.

### **Key Questions/Issues**

- Exactly what is health and biomedical science? What kinds of careers are there, and which ones might be interesting to me? (Health Science)
- What does the future look like in this industry sector? What will the employment picture look like when I graduate (from high school and from various types of postsecondary programs) and want to enter the workforce? (Algebra I)
- How is our country's population growing and changing? What will our population be like 10, 20, and 50 years from now? How will our country meet the challenges of a growing senior population? (Health Science and Algebra I)
- How can I learn to make thoughtful decisions about my future education and career goals? What social or economic issues might affect my choice? How can I obtain information on careers

- What are my interests and abilities? What are my strengths and weaknesses? What careers are best suited for me? (Health Science)
- How do the various careers that interest me compare? Which careers have the best salary and job prospects? How do the educational and/or training requirements of the various careers compare? (Algebra I)
- What are the key qualities of major historical figures in biomedical research and healthcare? What events influenced them? How does their vision continue to affect us today? (World History)

### Learning Scenario to Kick Off the Unit

Starting high school often signals students to start thinking about their first real job. Some of your friends want to work so they can help their family; some are looking forward to getting some cash to spend. No matter the reason, this is finally the chance to make your own money.

The burger joint down the street is a popular place to get a job. It has flexible hours, which allows students to work after school. But this restaurant pays only minimum wage. That seemed like a lot of money when you started, but some of your older co-workers complain that working full-time at minimum wage really doesn't pay the bills. Maybe it's time for you to start thinking about what kind of long-term career

you'd like to have and what kind of education it will take for you to reach that goal. There are probably a lot of options you don't know about. How will you find out what is right for you?

### Biomedical/Healthcare and Education Partner Roles

- The school librarian or media specialist can assist the Health Sciences and English instructors with teaching research skills, particularly in the use of print and other media resources.
- Career counselors from the school or local post-secondary institutions can visit to discuss career opportunities in health and biomedical sciences and their education requirements.
- Employees from various local biomedical research facilities or healthcare providers can be invited to speak to students in greater detail about their careers, either individually or as a panel.
- An additional speaker that can be invited to participate in the units and/or culminating event could include a Human Resource person from a healthcare system to discuss employee benefits like tuition assistance and the career ladder within healthcare systems and healthcare specialties.
- Contact the American Lung Association ([www.lungusa.org](http://www.lungusa.org)) and the American Society of Respiratory Care ([www.aarc.org](http://www.aarc.org)) for resources and materials.

#### SUBUNITS AND MAJOR TOPICS (ACROSS ACADEMIC AND TECHNICAL SUBJECT AREAS)

Subunit 1 <i>A Growth Industry</i>	Subunit 2 <i>Taking a Closer Look</i>	Subunit 3 <i>Finding a Good Match</i>
HEALTH SCIENCE · ALGEBRA I · ENGLISH LANGUAGE ARTS	HEALTH SCIENCE · ENGLISH LANGUAGE ARTS · WORLD HISTORY	ALGEBRA I · ENGLISH LANGUAGE ARTS
<ul style="list-style-type: none"> <li>• Survey of career pathways and opportunities within health and biomedical sciences</li> <li>• Percentages and percent change calculations</li> <li>• Single variable equations</li> <li>• Construction and interpretation of population graphs</li> <li>• Needs analysis</li> <li>• Purpose and format of research papers</li> </ul>	<ul style="list-style-type: none"> <li>• Developing clear research questions</li> <li>• Conduct research on several health and biomedical science careers using a variety of media resources</li> <li>• Synthesis of information from multiple media sources Integrate quotes and citations into written text</li> <li>• Social, economic, and cultural impact of major developments in biomedical research and healthcare</li> <li>• Contextual history and contributions of significant figures in the field</li> </ul>	<ul style="list-style-type: none"> <li>• Reading, interpreting, and graphing data</li> <li>• Single variable equations</li> <li>• Cost-reward analysis of various careers based on salary and training</li> <li>• Write research reports, including a coherent thesis, accurate background information from multiple sources, and development of an argument using evidence in support of a thesis or related claims</li> <li>• Delivery of formal oral presentation, including descriptive, expository, and persuasive rhetorical techniques</li> </ul>