

It's All Academic

Unit. Career Exploration

Problem Area. Health Science Career Pathways

Lesson. It's All Academic

■ **Student Learning Objectives.** Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify and describe levels of education, including four degrees conferred at the college or university level, and the typical time commitment required to obtain each degree.**
- 2 Identify several levels of training typically seen in health occupations and describe how these training levels correspond to academic preparation (education).**
- 3 Define *entrepreneurship* and identify opportunities in the field of health care.**

■ **List of Resources.** The following resources may be useful in teaching this lesson:

Badasch, S., and Chesebro, D. (2004). *Introduction to Health Occupations*, 6th ed. Upper Saddle River, NJ: Prentice Hall.

Booth, K. (2004). *Health Care Science Technology: Career Foundations*. New York: McGraw-Hill–Glencoe.

Gerdin, J. (2003). *Health Careers Today*, 3rd ed. St. Louis: Mosby.

Mapping Your Future, Inc. (2002). *Career Ship*. (A product of Mapping Your Future.) <http://www.mapping-your-future.org/selecting/schools.htm>



Simmers, L. (2004). *Health Science Career Exploration*. Clifton Park, NY: Delmar Learning.

U.S. Department of Education and U.S. Department of Labor. *Career Voyages* Web site: <http://www.careervoyages.gov/>

■ **List of Equipment, Tools, Supplies, and Facilities**

- ✓ Overhead or PowerPoint projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with Internet access
- ✓ Classroom resource and reference materials

■ **Terms.** The following terms are presented in this lesson (shown in bold italics):

- ▶ aide
- ▶ assistant
- ▶ associate's degree
- ▶ baccalaureate degree
- ▶ bachelor's degree
- ▶ doctorate
- ▶ doctor's degree
- ▶ elementary education
- ▶ entrepreneur
- ▶ master's degree
- ▶ postsecondary education
- ▶ professional
- ▶ secondary education
- ▶ technician
- ▶ technologist
- ▶ therapist
- ▶ vocational training

■ **Interest Approach.** Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situation. A possible approach is included here.

Introduce the topic of career planning and college preparation. Ask students what they already know about the education and training required for some of the careers they are interested in. Ask if they know the difference between various degrees that can be obtained from colleges and universities. Ask if they know the typical number of years required to obtain those degrees. Ask if they

can relate various degrees to some of the terms used for health care providers (e.g., technician, technologist, doctor, professional). Finally, ask students what they might know about entrepreneurs in the health care industry. Tell students that knowing the education requirements for various health care occupations will help them with career planning. Use the informal class discussion as a way of introducing the lecture material. Students can be asked to listen to the lecture, view the PowerPoint, take appropriate notes, and then complete an assessment that will evaluate their ability to listen and assimilate information on education and training for health care careers.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1: Identify and describe levels of education, including four degrees conferred at the college or university level, and the typical time commitment required to obtain each degree.

Anticipated Problem: What are the various levels of education, including four degrees conferred at the college or university level, and the typical time commitment required to obtain each degree?

- I. Levels of education (including college/university degrees) and typical time requirements
 - A. **Elementary education** refers to grammar school or grade school (grade 1 through 8) education.
 - B. **Secondary education** refers to education obtained in high school.
 - C. **Postsecondary education** refers to education obtained after high school.
 - D. **Vocational training** refers to training or education that is job or occupation related.
 - E. An **associate's degree** can be earned at a vocational or technical school, at a community or junior college, or at a four-year college or university. An associate's degree typically requires a prescribed two-year course of study and can be awarded in a variety of different disciplines or subject areas. A student who completes an associate's-degree nursing program, for example, might be awarded an Associate's Degree in Nursing (AND). Other health care programs award an Associate in Science (AS) degree or an Associate in Applied Science (AAS) degree.
 - F. A **baccalaureate degree**, or **bachelor's degree**, is awarded by a college or university. It typically requires a minimum of four years of study, with a concentration in a particular subject area, or major. Examples of baccalaureate

degrees are Bachelor of Science (BS), Bachelor of Science in Nursing (BSN), Bachelor of Social Work (BSW), and Bachelor of Arts (BA).

- G. A **master's degree** is also awarded at the college or university level. It typically requires one to two more years of study beyond the bachelor's degree. Examples of master's degrees are Master of Science (MS), Master of Social Work (MSW), Master of Public Health (MPH), and Master of Science in Nursing (MSN).
- H. A **doctorate**, or **doctor's degree**, is the highest degree awarded by a college or university. It typically requires two or more years beyond a master's degree. In some cases, a doctorate may require as many as four to eight additional years of study, depending on the discipline or specialty area. Examples of doctorates are Doctor of Philosophy (PhD), Doctor of Medicine (MD), Doctor of Osteopathy (DO), Doctor of Optometry (OD), Doctor of Veterinary Medicine (DVM), Doctor of Nursing Science (DNSc), and Doctor of Education (EdD).

Many techniques can be used to help students master this objective. As an example, students can read Chapter 4 in Health Science Career Exploration or Unit One in Health Care Science Technology: Career Foundations. Students can also be encouraged to explore the Web sites noted in the List of Resources above. Students can be asked to listen to the lecture material. Students can also complete LS–A.

Objective 2: Identify several levels of training typically seen in health occupations and describe how these training levels correspond to academic preparation (education).

Anticipated Problem: What are several levels of training typically seen in health occupations, and how do these training levels correspond to academic preparation (education)?

II. Training levels

- A. Generally speaking, in the health care industry, you can associate a health care worker's job or position title with a certain level of education and on-the-job training, though requirements might vary slightly from state to state.
- B. An **aide** or **assistant** typically has one or more years of vocational training that combines classroom and on-the-job training. Occasionally aides or assistants have less than a year of specialized vocational training. Examples of aides or assistants are dental assistants, medical assistants, and nursing assistants.
- C. A **technician** typically has completed a two-year associate degree, a specialized vocational training program, or three to four years of on-the-job training. Examples of technicians are dental laboratory technicians, medical laboratory technicians, surgical technicians, and emergency medical technicians (EMTs).
- D. A **technologist** or **therapist** has typically completed three to four years of college (usually a bachelor's degree) plus work experience or on-the-job training.

Examples of careers at this level are medical laboratory technologist and physical therapist.

- E. In the health care field, a **professional** typically refers to a worker who has completed four or more years of college and has earned a bachelor's degree, master's degree, or doctorate. Examples of health care professionals are registered nurses with bachelor's degrees or higher, nurse practitioners, doctors, and dentists.

Many techniques can be used to help students master this objective. As an example, students can read Chapter 4 in Health Science Career Exploration or Unit One in Health Care Science Technology. Students can also be encouraged to explore the Web sites noted in the List of Resources above. Students can absorb the content of the lesson presented in a lecture format or as a PowerPoint presentation.

Objective 3: Define *entrepreneurship* and identify opportunities in the field of health care.

Anticipated Problem: What is entrepreneurship? What opportunities are there for entrepreneurship in health care?

- III. Define *entrepreneurship* and identify opportunities in the field of health care.
- A. An **entrepreneur** is an individual who organizes, manages, and assumes the risk of his or her own business.
- B. In the current health care industry, there are many health care occupations that allow a trained individual to become independent. However, even the trained entrepreneur must work under the direction or guidance of a physician when managing a business that provides health care. Examples: nurse with a legal degree who owns a business that provides expert witnesses in the area of health care; massage therapist who owns his or her own business.

Many techniques can be used to help students master this objective. As an example, students can read Chapter 4 in Health Science Career Exploration or Unit One in Health Care Science Technology. Students can also be encouraged to explore the Web sites noted in the List of Resources above. Students can also brainstorm business ventures that are possible in the health care field.

Review/Summary. Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. Questions at the ends of chapters in the textbook may also be used in the review/summary.

- **Application.** Use the included lab sheet to apply the information presented in the lesson.
- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.

■ **Answers to Sample Test:**

Part One: True or False

1. F
2. T
3. F
4. T
5. T
6. T
7. F
8. F
9. F
10. T

Part Two: Multiple Choice

1. d
2. c
3. a
4. b
5. c
6. b
7. a
8. a
9. c
10. a

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► Part One: True or False

Instructions: Write *T* for true or *F* for false.

- ___ 1. An associate's degree is awarded by a college or university after a prescribed course of study that usually lasts four or more years.
- ___ 2. A master's degree is awarded by a college or university after completing one or more years of study beyond a bachelor's degree.
- ___ 3. The level of training for a technician usually requires more than four years of college.
- ___ 4. A bachelor's degree is required for every health care worker with the title of "assistant."
- ___ 5. As they operate their own businesses, entrepreneurs that work in the health care area may need to work with, or under the direction or guidance of, a doctor.
- ___ 6. A technologist or therapist typically has a minimum of a bachelor's degree, or four years of college, in addition to on-the-job training.
- ___ 7. A baccalaureate degree is the same as an associate's degree.
- ___ 8. Postsecondary training refers to education you receive in grammar school or grade school.
- ___ 9. Secondary education refers to college education.
- ___ 10. Vocational training refers to job-related training.



► **Part Two: Multiple Choice**

Instructions: Write the letter of the correct answer.

- ____ 1. Degree awarded by a college or university after four or more years of study:
- a. associate's degree
 - b. bachelor's degree
 - c. master's degree
 - d. both b & c
- ____ 2. An individual who organizes, manages, and assumes the risk of a business is a/an:
- a. technician
 - b. technologist
 - c. entrepreneur
 - d. professional
- ____ 3. Education received in high school is referred to as:
- a. secondary education
 - b. elementary education
 - c. postsecondary education
 - d. vocational training
- ____ 4. Training that is career focused and job related is referred to as:
- a. postsecondary training
 - b. vocational training
 - c. elementary education
 - d. professional training
- ____ 5. Education and training received after high school is known as:
- a. elementary education
 - b. secondary education
 - c. postsecondary education
 - d. vocational training
- ____ 6. How many years does it typically take to acquire a bachelor's, or baccalaureate, degree?
- a. two
 - b. four
 - c. six
 - d. eight or more

- ____ 7. How many years does it typically take to acquire an associate's degree?
- a. two
 - b. four
 - c. six
 - d. eight or more
- ____ 8. Which degree is the highest degree given at a university or college?
- a. doctorate
 - b. master's
 - c. associate's
 - d. professional
- ____ 9. An aide or assistant typically has:
- a. an associate's degree
 - b. no specialized training
 - c. specialized training or on-the-job training
 - d. elementary education only
- ____ 10. The term "professional" usually refers to a health care worker with:
- a. an advanced degree
 - b. no specialized training
 - c. secondary education only
 - d. an associate's degree

It's All Academic (Education & Training)

Overview

Health Science Technology students will listen to a lecture/presentation on education and training relevant to health care careers and health care career preparation. This lesson plan can serve as the basis for the lesson. The lecture/presentation should include information on levels of education, various college or university degrees, and various levels of training associated with different health care occupations. The lecture/presentation should include terminology related to education, academic degrees, and training levels relevant to health care occupations, as well as information on entrepreneurship opportunities in health care. Students will be encouraged to use active listening skills during the presentation and to engage in activities that facilitate learning while listening (e.g., asking questions, seeking clarification, taking notes, and using graphic organizers). Following the lecture/presentation, students will be given an opportunity to reflect on the information from the lecture/presentation and on their notes. Students will then write a one-page (minimum) summary of the information provided in the lecture/presentation. Students will be evaluated accordingly:

- ◆ *Summary of Key Elements with Descriptions/Explanations or Supporting Details:* Identify assigned number of key elements and include descriptions/explanations or supporting details:
 - Identify at least two levels (types) of education and provide a description/explanation or supporting detail for each.
 - Identify at least two academic degrees (college/university degrees) and provide a description/explanation or supporting detail for each.
 - Identify at least two terms related to the training levels associated with health care careers and provide a description/explanation or supporting detail for each.
- ◆ *Accuracy of Information:* Construct an accurate summary of the lecture/presentation material.

Procedures

1. In order to listen effectively in formal and informal situations, students should experience sufficient learning opportunities to develop the following skills:
 - ◆ Demonstrate understanding of material, concepts, and ideas in formal/informal presentations.
 - ◆ Analyze, synthesize, and evaluate information from recorded material and live presentations.

- ◆ Paraphrase and summarize, with appropriate editorial comments, information from formal, informal, and media presentations.
- ◆ Ask probing, idea-generating questions and make appropriate statements to clarify and add to meaning.
- ◆ Analyze and evaluate verbal and nonverbal cues.
- ◆ Modify, control, or block out both internal and external distractions.

Students employed in various health careers are required to understand the roles and responsibilities of their jobs. They should be aware of the career paths and the education and training options available that would allow them to meet the requirements for a health care career. Health care workers are also required to understand the requirements for maintaining their qualifications and the need for continuing education. Listening skills are essential in gathering information on roles, responsibilities, education and job training opportunities, job requirements, and continuing education. Listening to a lesson on education and training for health care workers gives students an opportunity to practice their listening skills and gain knowledge on career pathways and career education and training. This assessment aligns with the National Knowledge and Skills Communications and Systems Standards.

2. Prior to the assessment, the instructor will provide sufficient opportunities for students to practice listening skills.
3. Students will be familiar with active listening techniques.
4. Health Science Technology students will review and discuss the assessment task and how the rubric will be used to grade their work.
5. Each student will listen to a lecture/presentation on the education and training relevant to health care careers.
6. Students will be encouraged to ask questions during the lecture/presentation and engage in activities that enhance their learning while listening (e.g., note taking, use of graphic organizers, clarification, validation).
7. After listening to the lecture/presentation, students will be given an opportunity to reflect on the information presented and on their notes.
8. Students will then write a one-page (minimum) summary of the information presented in the lecture/presentation, making sure to include the required key elements noted above and on the rubric.
9. Each student's performance will be evaluated using the rubric. Add each student's scores to determine the performance level.

Time Requirements

One or two class periods (50 minutes each)

Resources

- ◆ Student Instructions
- ◆ Scoring Rubric

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1. Listen to the lecture/presentation on education and training related to health care careers and health care career preparation.
2. Use active listening skills during the lecture/presentation.
3. Ask questions, as needed, and ask your instructor to clarify any information you need made clearer.
4. Use note taking or other strategies to enhance your learning as you listen to the presentation (e.g., graphic organizers, abbreviations, acronyms).
5. After the lecture/presentation, take some time to reflect on the information and on your notes and to organize your thoughts.
6. Write a one-page (minimum) summary of the lecture/presentation material.
7. Include in your summary, at a minimum, the following key elements:
 - a. Name at least two levels (types) of education and provide a description/explanation or supporting detail for each.
 - b. Name at least two academic degrees (college/university degrees) and provide a description/explanation or supporting detail for each.
 - c. Identify at least two terms related to the training levels associated with health care careers and provide a description/explanation or supporting detail for each.
8. Be sure your summary is accurate and legible.



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- ◆ Exceeds standard (7–8 total points)
- ◆ Meets standard (5–6 total points)
- ◆ Approaches standard (3–4 total points)
- ◆ Begins standard (2 total points)

	Summary of Key Elements	Accuracy of Information
4	<ul style="list-style-type: none"> • Provides thorough summary of lecture/presentation material. • Identifies three or more levels/types of education and provides description/explanation or supporting detail for each. • Identifies three or more academic degrees and provides description/explanation or supporting detail for each. • Identifies three or more terms related to training levels associated with health care careers and provides description/explanation or supporting detail for each. 	<ul style="list-style-type: none"> • All information is accurate.
3	<ul style="list-style-type: none"> • Provides adequate summary of lecture/presentation material. • Identifies at least two levels/types of education and provides description/explanation or supporting detail for each. • Identifies at least two academic degrees and provides description/explanation or supporting detail for each. • Identifies at least two terms related to training levels associated with health care careers and provides description/explanation or supporting detail for each. 	<ul style="list-style-type: none"> • Most information is accurate.
2	<ul style="list-style-type: none"> • Provides weak summary of lecture/presentation material. • Identifies one or two levels/types of education and provides description/explanation or supporting detail for at least one. • Identifies one or two academic degrees and provides description/explanation or supporting detail for at least one. • Identifies one or two terms related to training levels associated with health care careers and provides description/explanation or supporting detail for at least one. 	<ul style="list-style-type: none"> • Some information is accurate.
1	<ul style="list-style-type: none"> • Provides poor summary of lecture/presentation material. • Identifies one or no level/type of education; provides no description/explanation or supporting detail. • Identifies one or no academic degree; provides no description/explanation or supporting detail. • Identifies one or no term related to training levels associated with health care careers; provides no description/explanation or supporting detail. 	<ul style="list-style-type: none"> • Most information is inaccurate.
Score		

It's All Academic (Education & Training)

Purpose

The purpose of this lab sheet is to reinforce the information from the “It’s All Academic (Education & Training)” lecture/presentation. Students will read the descriptions and definitions on the lab sheet and complete the crossword puzzle with the corresponding vocabulary terms that relate to education and training.

Objectives

1. Match definitions/descriptions of educational requirements with the corresponding degrees.
2. Match definitions/descriptions of levels of training with the corresponding vocabulary terms.

Materials

- ◆ copies of lab sheet
- ◆ writing utensils

Procedure

1. Have students complete the lab sheet either in class or as a homework assignment.
2. Have students read the definitions/descriptions in each column. They will then fill in the correct name of the degree or training level that corresponds to each definition/description.
3. Use the Answer Key to correct each student’s lab sheet.

It's All Academic (Education & Training)

Procedure

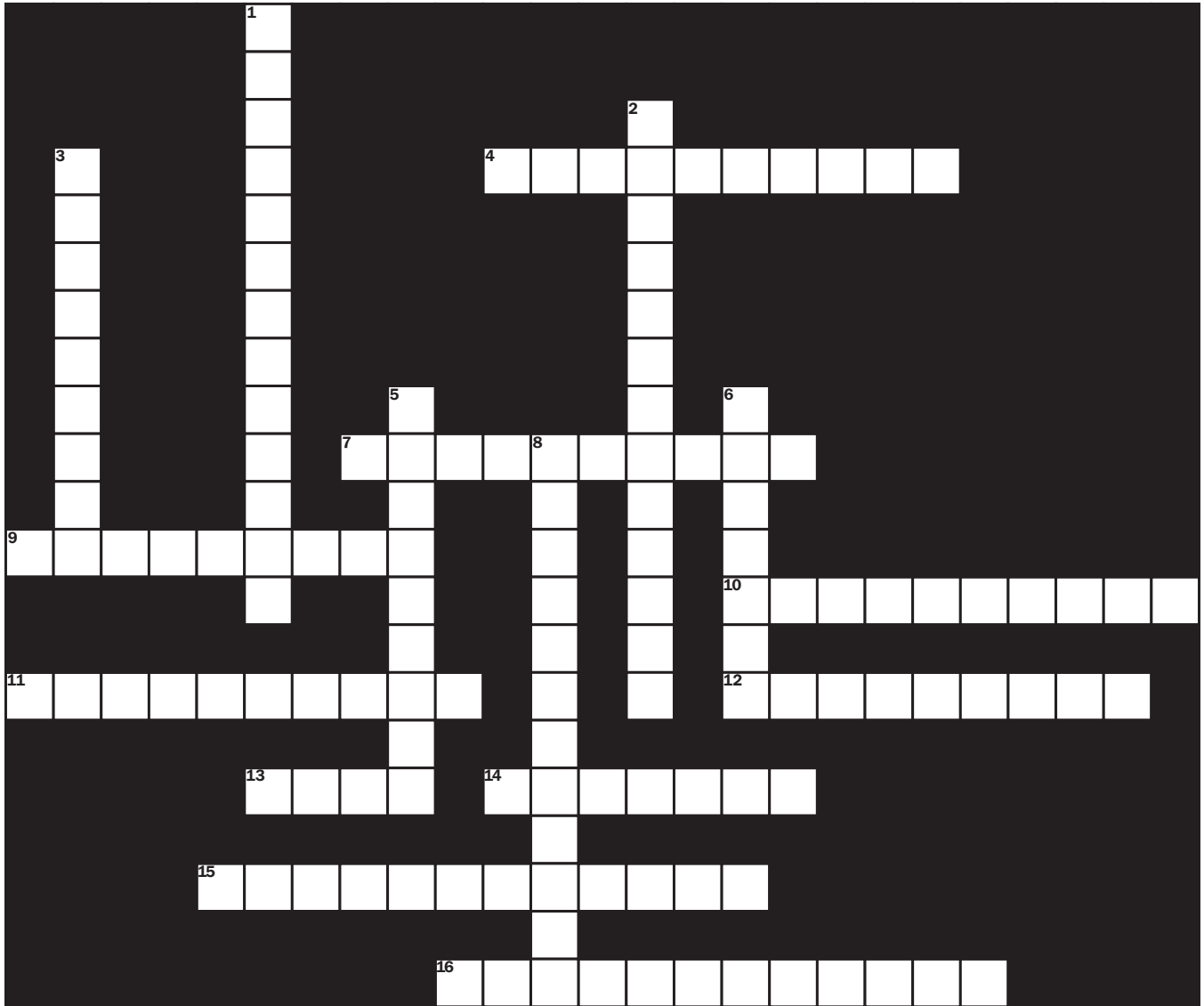
Use the definitions/descriptions below to complete the crossword puzzle.

Across

4. A degree awarded after a two-year prescribed course of study
7. Career-focused education including on-the-job training
9. An entry-level position with one or more years of education or on-the-job training
10. Education received in grammar school
11. A worker with an associate's degree, specialized training, or three to four years work experience
12. High school education
13. A health care worker at the assistant level
14. Another name for doctorate
15. A health care worker with advanced training and education
16. An independent business owner

Down

1. Another name for bachelor's degree
2. Education received after high school
3. Awarded after a four-year course of study
5. The highest degree awarded by a college/university
6. A degree requiring one to two years beyond a bachelor's degree.
8. May have bachelor's degree or three to four years of college with work experience.



It's All Academic (Education & Training)

