



South Carolina Academic/Career Development Integration Activity (DRAFT)

Title **Fastest Growing Occupations (M-5)**
Subject **Math** **Grade Level(s)** **8**

SC Content Standard – Number and Operation Grades 6-8. Standard I. Understand numbers, ways of representing numbers, relationships among numbers, and number systems. Expectation A. Work flexibly with fractions, decimals, and percents to solve problems.

I-A.1 (8). Solve real-world problems involving fractions, decimals, and percents.

National Career Development Guidelines Goal/Indicator

Career Management GOAL CM3. Use accurate, current, and unbiased career information during career planning and management.

Indicator CM3.A2. Demonstrate the ability to use different types of career information resources (occupational, educational, employment, and economic) to support career planning.

Career Development Objectives

1. Students will demonstrate the ability to solve problems involving percents.
2. Students will understand how to use a chart of employment outlook data.

Assessment

1. Students will correctly solve 10 problems involving percents.
2. Students will demonstrate understanding of how to use a chart of employment outlook data (participation in class discussion, observation).

Preparation

- Prior Learning—Instruction in solving problems involving percents.
- Handouts/Worksheets—*Ten Fastest Growing Occupations* worksheet and teacher answer key
- Resources/Materials—writing materials, *Where the Jobs Are* (www.acrnetwork.org/ncdg/ncdg_teachers.htm) Optional: access to computers and the Internet, library, SCOIS, O*Net (www.onetcenter.org), or other career information system
- Time Required—1 class period

Procedures

Part One

- In this activity, students will use percents to solve problems about employment information.
- Review with students how to solve problems involving percents.
- Give students the *Ten Fastest Growing Occupations* worksheet and review it with them.
- Tell students to complete the chart on job growth by finding the actual number of new jobs for each occupation and the percent of growth for each occupation.

Part Two — Career Development Connections

- Begin the discussion by telling students that the federal and state governments collect all kinds of information about employment outlook. What jobs are growing and not, what kinds of jobs employ the most people, wage and salary information, and more. (Note: visit www.acrnetwork.org/ncdg/ncdg_teachers.htm to download the resource *Where the Jobs Are* that explains employment outlook information).
- Ask students to brainstorm why knowing employment information might be helpful to them as they think about what kind of job they might like to have in the future.
- Engage students in a discussion about the occupations on the list of ten fastest growing. Questions for discussion might include:
 - What do you know about these occupations...are they familiar to you?
 - Do you know anybody working in one of these occupations?
 - How many of the fastest growing occupations require either 2 or 4 years of college? How many require other kinds of training?
 - What are some occupations you are thinking about?
 - What kind of education/training would those occupations require?
 - What school subjects might help you prepare for an occupation of interest to you.
- Optional: have students further explore occupations using SCOIS or O*Net or another career information system. Have students visit the local Career Center and explore the CTE programs there.

Crosswalks

SC Career Guidance Standard/Competency

Learning to Work Standard 1. Students will understand the relationship among personal qualities, education and training, and the world of work.

Competency 1.5. Identify a variety of traditional and nontraditional occupations.

Key Employability Skills

Thinking Skills—Critical thinking

Information Management—Acquires, interprets, and communicates information

* Adapted from *Career Development Tool Kit, Grades 6-8*, Linda Kobylarz & Associates, 2000. Used with permission.

The 10 Fastest Growing Occupations, 2004-14* (Answer Key)
(Numbers in thousands)

Occupation	Employment		Change	
	2004	2014	Number	Percent
Home health aides Short term on-the-job training	624	974	350	56
Network systems and data communications analysts Bachelor's degree	231	357	126	55
Medical assistants Moderate-term on-the-job training	387	589	202	52
Physician assistants Bachelor's degree	62	93	31	50
Computer software engineers, applications Bachelor's degree	460	682	222	48
Physical therapist assistants Associate degree	59	85	26	44
Dental hygienists Associate degree	158	226	68	43
Computer software engineers, systems software Bachelor's degree	340	486	146	43
Dental assistants Moderate-term on-the-job training	267	382	114	43
Personal and home care aides Short term on-the-job training	701	988	287	41

* Source: U. S. Bureau of Labor Statistics, December 2005

The 10 Fastest Growing Occupations, 2004-14*

Name _____

Date _____

Directions: Compute the number change and the percent change for each occupation listed in the chart below.

Occupation	Employment		Change	
	2004	2014	Number	Percent
Home health aides Short term on-the-job training	624,000	974,000		
Network systems and data communications analysts Bachelor's degree	231,000	357,000		
Medical assistants Moderate-term on-the-job training	387,000	589,000		
Physician assistants Bachelor's degree	62,000	93,000		
Computer software engineers, applications Bachelor's degree	460,000	682,000		
Physical therapist assistants Associate degree	59,000	85,000		
Dental hygienists Associate degree	158,000	226,000		
Computer software engineers, systems software Bachelor's degree	340,000	486,000		
Dental assistants Moderate-term on-the-job training	267,000	382,000		
Personal and home care aides Short term on-the-job training	701,000	988,000		

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