South Carolina Academic/Career Development Integration Activity

Title **Scientific Investigation Reflection (ES-4)**
Subject **Science** **Grade Level 5**

SC Content Standard – Scientific Inquiry – Grade 5. Standard 5-1. The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

5-1.3. Plan and conduct controlled scientific investigations, manipulating one variable at a time.

National Career Development Guidelines Goal/Indicator
Career Management GOAL CM4. Master academic, occupational, and general employability skills in order to obtain, create, maintain, and/or advance your employment.

Indicator CM4.K3. Recognize that a variety of general employability skills and personal qualities (e.g., critical thinking; problem solving; resource, information, and technology management; interpersonal skills; honesty; and dependability) are important to success in school and employment.

Career Development Objectives
1. The student will plan and conduct a controlled scientific investigation, manipulating one variable at a time.
2. The student will recognize employability skills used in the scientific investigation.

Assessment
1. The student will plan and conduct a controlled scientific investigation, manipulating one variable at a time (observation). The student will document the results of the investigation (completion of teacher's standard lab report form).
2. The student will complete the *Think About It! Reflection Worksheet*.

Preparation
• Prior Learning—Instruction in planning and conducting a controlled scientific investigation
• Handouts/Worksheets—*Think About It! Reflection Worksheet, Skills for a Lifetime* handout, and teacher's standard lab report form
• Resources/Materials—textbook, tools and instruments for conducting the investigation
• Time Required—60-120 minutes for instruction and lab work plus wrap-up discussion

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

Procedures
Part One (60-120 minutes)

• In this activity, students will plan and conduct a controlled scientific investigation, manipulating one variable at a time. The student will recognize the employability skills used in the scientific investigation.
• Begin by reviewing the procedures for planning and conducting a controlled scientific investigation in which one variable at a time is manipulated.
• Describe the lab investigation. Have students identify questions and generate a hypothesis.
• Give students time to complete the experiment, collect, and record the data.
• Discuss students' findings and what they learned.

Part Two—Career Development Connections
• Give students a copy of the *Skills for a Lifetime* handout. Discuss the employability skills. What skills did students use to complete the investigation?
• Have students complete the *Think About It! Reflection Worksheet.* Discuss their responses and what they learned.
• Point out to students that the *Skills for a Lifetime* are important in our personal lives, in school, and at work. Encourage students to work on developing those skills.

Crosswalks
SC Career Guidance Standard/Competency
Learning to Work Standard 4. Students will demonstrate a positive attitude toward work and the ability to work together.
Competency 4.1. Recognize the personal qualities of responsibility, dependability, punctuality, and integrity in the work place.

Key Employability Skills
Personal Qualities—Responsibility, self-management
Thinking Skills—Problem-solving, decision-making
Information Management—Acquires, interprets, and communicates information