Individual Strategy Scenario

Individual Strategy #1

Strategy: Advanced Organizer

Content: Operating principles of the emulsion tube in a carburetor.

Title: The Emulsion Tube

Time Required: 30 Minutes

Number of Participants: 10-15

Target Audience: Aircraft A&P mechanics

Goal of Activity: To prepare students of an aviation maintenance school who are about to embark on a course which involves carburetor maintenance and repair.

Learning Outcomes:
Gagne's Taxonomy - Verbal Information
Bloom's Taxonomy - Knowledge, Comprehension, and Application

Learner Characteristics: The learners are students attending an aircraft maintenance school. They will primarily be males from 18 to 55 years old. These students are mostly high school graduates with little to no college. Approximately half of the students are already trained in the field. The remaining population will be new to the field and seeking their certification as an A&P aircraft mechanic.

Entry Skills: The learners are characteristically mechanically inclined and highly motivated to learn this instruction.

Setting: Classroom

Media: Paper handout and computer with presentation hardware and Powerpoint software.

Process:
1. The instructor will gain audience attention with a handout that illustrates the operating principles of the emulsion tube. It will consist of an intriguing picture of a person drawing liquid through a straw.

2. An informal discussion will ensue as the instructor prompts the students for prior knowledge about fuel to air ratios, stoichiometric mixtures, and its relation to the combustion chamber process.

3. The instructor will then open a Powerpoint presentation that further exemplifies the function of the emulsion tube and subsequent application to the carburetor.

Strategy Assessment: The learners will be given a test on carburetor operation which will include questions about the operating principles of the emulsion tube. This will determine if the advanced organizer was beneficial for the melding of prior knowledge with need-to-know knowledge.

Author: William Beam

Reference: West, C.K., Farmer, J.A., & Wolff, P.M. (1991). Instructional Design: Implications from Cognitive Science, Boston: Allyn and Bacon