Activity name: It's In the Mix

How patient and creative are you? Although the problem presented in this activity is the sort that is most conveniently solved in a laboratory setting, do you think you could find a way to do it using household items? Now there's a challenge! This activity is meant to provide a real-world application of the ATEEC Recommended Core Curriculum's math, science, technical, communications, or critical thinking knowledge and skill concepts, which have been identified by the ATEEC Fellows as necessary preparation for environmental technology occupations.

Appropriate for which course(s)?): High school and community college general science

Concept/skill learned (i.e. from K/S Tables): Correlate results and plan action needed. Generate new ideas. Demonstrate problem solving skills.

SCANS skills addressed:: Problem solving, monitors and corrects performance, improves and designs systems, applies technology to a task.

Learning objectives - Students will be able to:

- Evaluate difficulties that can occur in attempting to separate various materials.

Approximate time to complete activity: 1 class meeting

Source of idea or activity (for published source, please include author, title, publisher, date): Rick Wells, Science Educator, Central High School, Davenport, Iowa

Materials/resources needed (equipment, print media, electronic media, videos, supplies, etc.): common laboratory equipment, assorted glass-ware, balance, materials sieves, magnets

Description of Activity:

Students will apply their knowledge of laboratory procedures, scientific principles, and problem solving skills in this activity. They are given a material sample that contains equal amounts, by mass, of granulated salt, fine sawdust, iron filings, and fine sand. The students carry out the following:

- develop a procedure for separating the materials,
- perform the procedure,
- quantify their results, and
- evaluate their performance.

Activity submitted by: Dennis Robeson (Return to *http:/www.ateec.org/*)