Instructor: Sharon B. Lautner (2003 Science Teacher Workshop participant)
School District: Waretown
Lesson Title: Hands-on Half-Life
Grade: 6
Subject: Science
Overview: This lesson is designed to have the students understand the concept of half-life of radioactive elements.
Objectives:

- Students will be able to calculate the time period required for a radioactive element to become stable.
- Students will work in cooperative groups to create their own fictitious radioactive element and decide on the length of its half-life.
- Students will then exchange their information with other groups and compare calculations

Materials: Bingo chips, paper and pen
Procedure:

1. Students are told to count out 128 bingo chips. This represents a fictitious radioactive element "Cobbium 128" which has a half-life of 50 years
2. The concept of half-life is explained and students are instructed to remove half of the chips and record the number of years
3. They are told to continue this pattern until they reach "1"
4. Hopefully the students will discover that it is quicker to figure this out using calculations rather than counting out bingo chips.
5. Students then create their own fictitious radioactive element and its half-life.
6. They calculate the number of years until this element is stable. Exchange their information with the other groups and compare answers.
7. Go back and using the students own information have them see that no matter how high they chose their half-life to be it still took less than 10 divisions to get down to the number "1"