

1023-K1-1733      **Shawnee McMurrin\*** ([shawnee.mcmurrin@usma.edu](mailto:shawnee.mcmurrin@usma.edu)), Department of Mathematical Sciences,  
US Military Academy, West Point, NY 10996. *Using Tic-Tacs to Freshen up Carbon  
Dating*. Preliminary report.

What better application of exponential decay than radiocarbon dating? We are probably familiar with the typical problem: *The radioactive isotope  $^{14}\text{C}$  has a half-life of about 5730 years. An artifact is found with 75% of its original  $^{14}\text{C}$  content. How old is the artifact?* Often this is the extent of the “application”. We move on to the next example and lose this fantastic opportunity to explore the rich interdisciplinary nature of radiocarbon dating.

At the US Military Academy, a unit on biological modeling applications forms the culminating component of the first semester core mathematics course. In this presentation we describe the radiocarbon dating module within that unit, including a tic-tac<sup>®</sup> activity designed to help students make connections between the science and mathematics of radiocarbon dating while enhancing their skills with functions, modeling and proportional reasoning. An excuse to bring candy into the classroom? Who can resist? (Received September 26, 2006)