

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute 2012 Volume IV: Engineering in the K-12 Classroom: Math and Science Education for the 21st-Century Workforce

Animating a Nuclear Process

Guide for Curriculum Unit 12.04.04 by William O'Shea

This is a unit designed to compel learners to engage material that might otherwise be inaccessible. It could just as easily be called "Animating a Scientific Process," if one only substituted the scientific process of their choosing for that of the nuclear process.

The challenge of presenting complex material to a population of students who might not otherwise find the material engaging is a struggle all teachers understand. This unit was born of that struggle. It is the express goal of this teacher to create a unit that draws in students and inspires their interest.

In the first half of this unit, students study nuclear chemistry. In the second half of this unit, students collaborate with a partner to plan an animation that details a nuclear process. Students then implement and later refine that design. In the process, students meet current state standards in chemistry and aspire to meet the Next Generation Science Standards currently in development.

(Recommended for Chemistry and Physics, grades 9-12)

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