Radioactive Dice
Implementation Guide

0. Prepare.
    1. Review what you will of the **Radioactive Dice – Background** concepts.
    2. Print a class set of any handouts you wish to use.
    3. Borrow an NCGS Radioactive Dice Kit or otherwise acquire 50 standard casino dice.
1. Introduce any background material.
   Esp. regarding what radioactive decay is and why it can be simulated with dice. Refer to **Radioactive Dice – Background** for more on concepts you might introduce.
2. Conduct the Experiment.
   Note: You may elect to delegate the following "jobs" to different students. One might roll dice, while another might identify, count and remove "decayed" dice. Another might be in charge of recording roll results on the class whiteboard, etc.
    1. Roll all dice at once (initially 50).
       Note: It's best to do this by shaking the dice in a box or tray, otherwise, they might get lost. Make sure the dice roll (as opposed to slide) in whatever container you elect to use.
    2. Set aside all dice that landed on ☢.
       These are said to have decayed from radioactive uranium to stable lead.
    3. Have each student record on their **Experiment Data Sheet**…
        i. …the number of dice that decayed on that roll
        ii. …the number of dice remaining
        iii. …the running total of the number of dice that have decayed so far.
    4. Repeat steps 2.1 through 2.3 until either all dice have decayed or 30 rolls have elapsed (and the **Experiment Data Sheets** are full)
3. Have each student transfer their data from their **Experiment Data Sheet** to the graph on their **Data Interpretation** handout and answer the associated questions.
4. If you have elected to include the **Radiometric Dating** or **Functions & Modeling** components, you might introduce and distribute any of those at this time.