

Half life

Today I learned how to write the equations and how it is written

Why does half life happen every 5730 yrs? why not every 1000 yrs or 500 yrs?

the length of time it takes for 50% of the material to have undergone radioactive decay.

Example carbon-14, half-life is 5730 years

100% 5730 yrs 50% 5730 yrs 6.25% 5730 yrs

If I start w/ 20 grams of carbon-14 and the half life is 5730 years, how many grams am I left w/ after 5730 years?

5730 = 1 half life
20 grams $\div 2 = 10$ grams

We have a handy-dandy equation we can use

$$A_E = A_S \cdot 0.5^{\left(\frac{t}{h}\right)}$$

A_E = amount ending w/

A_S = amount starting w/

t = time gone by

h = length of the half life

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