

Edexcel GCSE Physics

Topic 6.23-6.27 - Modelling Decay

Flashcards

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Define the activity of an unstable nucleus.



Define the activity of an unstable nucleus.

Activity is the rate at which a source of unstable nuclei decays.



What is the unit of radioactive activity?



What is the unit of radioactive activity?

Becquerel (Bq)



What is count-rate?



What is count-rate?

The number of radioactive decays per second for a radioactive source.



Give an example of a detector that may be used to measure count-rate.



Give an example of a detector that may be used to measure count-rate.

Geiger-Muller tube



Describe the nature of radioactive decay.



Describe the nature of radioactive decay.

- Random
- Which nuclei decays and when is determined only by chance
- It is impossible to predict which nuclei will decay and when



Define the half-life of a radioactive isotope.



Define the half-life of a radioactive isotope.

- The time it takes for the number of unstable nuclei in a substance to halve
- The time it takes for the count rate from a sample to fall to half its initial level

