

8 Contamination most hazardous: alpha sources

- Contamination occurs when you touch or ingest radioactive material (usually dust).
- The atoms in dust can then decay
- Gloves, tongs and protective suits prevent contamination.



Extended answer

9 Irradiation most hazardous: beta and gamma sources

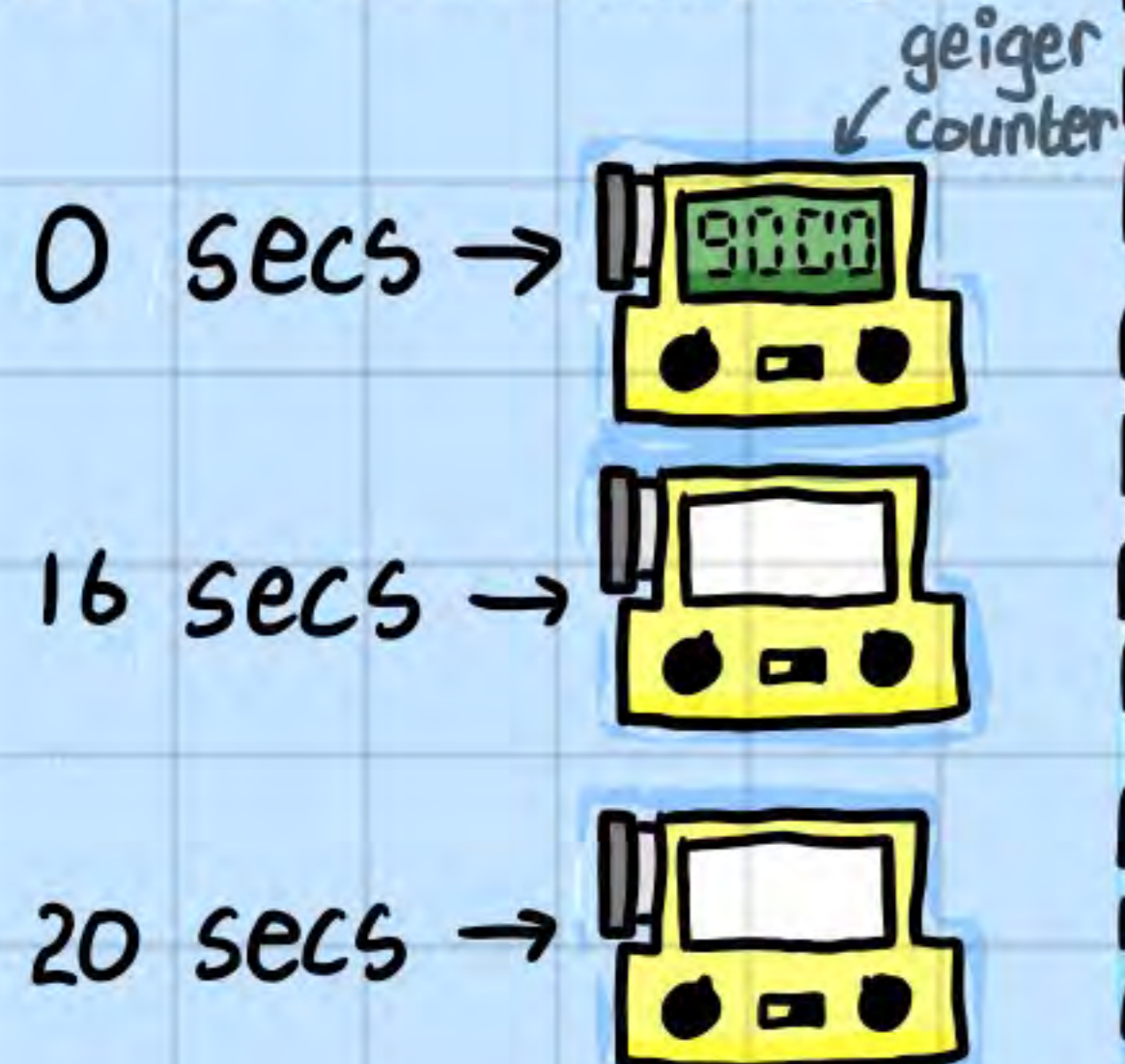
- Irradiation is the exposure to the products of radioactive decay.
- An irradiated object is not made radioactive
- lead lined boxes and shields reduce the effects of irradiation.



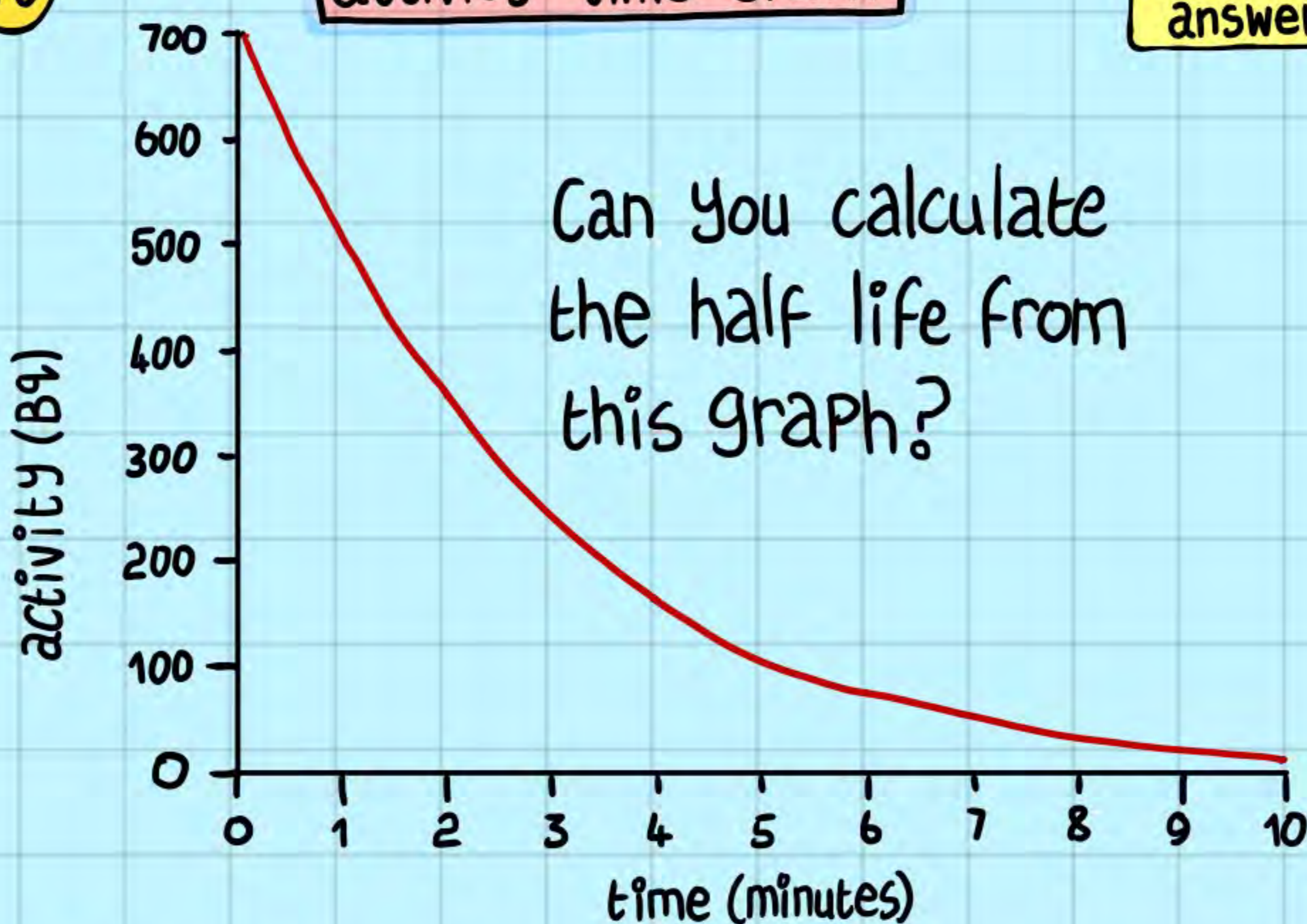
Extended answer

half life calculations

A source has a half life of 8 seconds. Its initial activity is 9000 Bq. What is the activity at



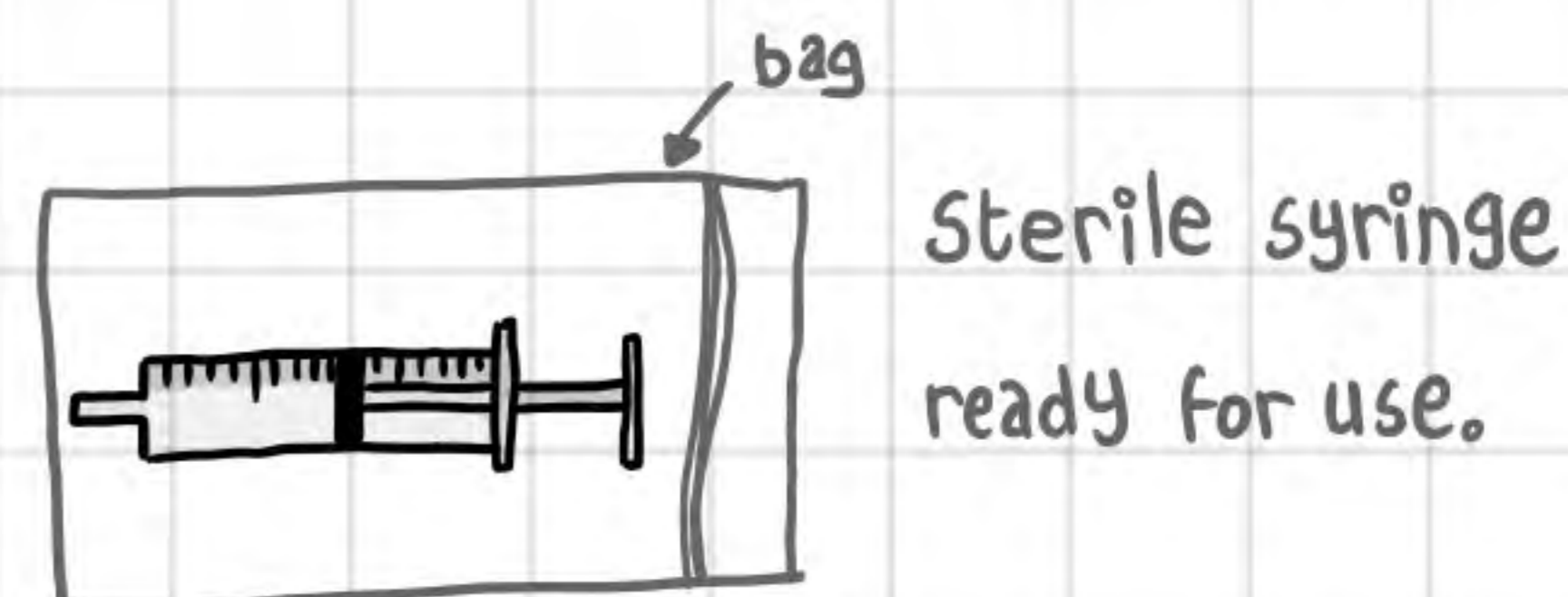
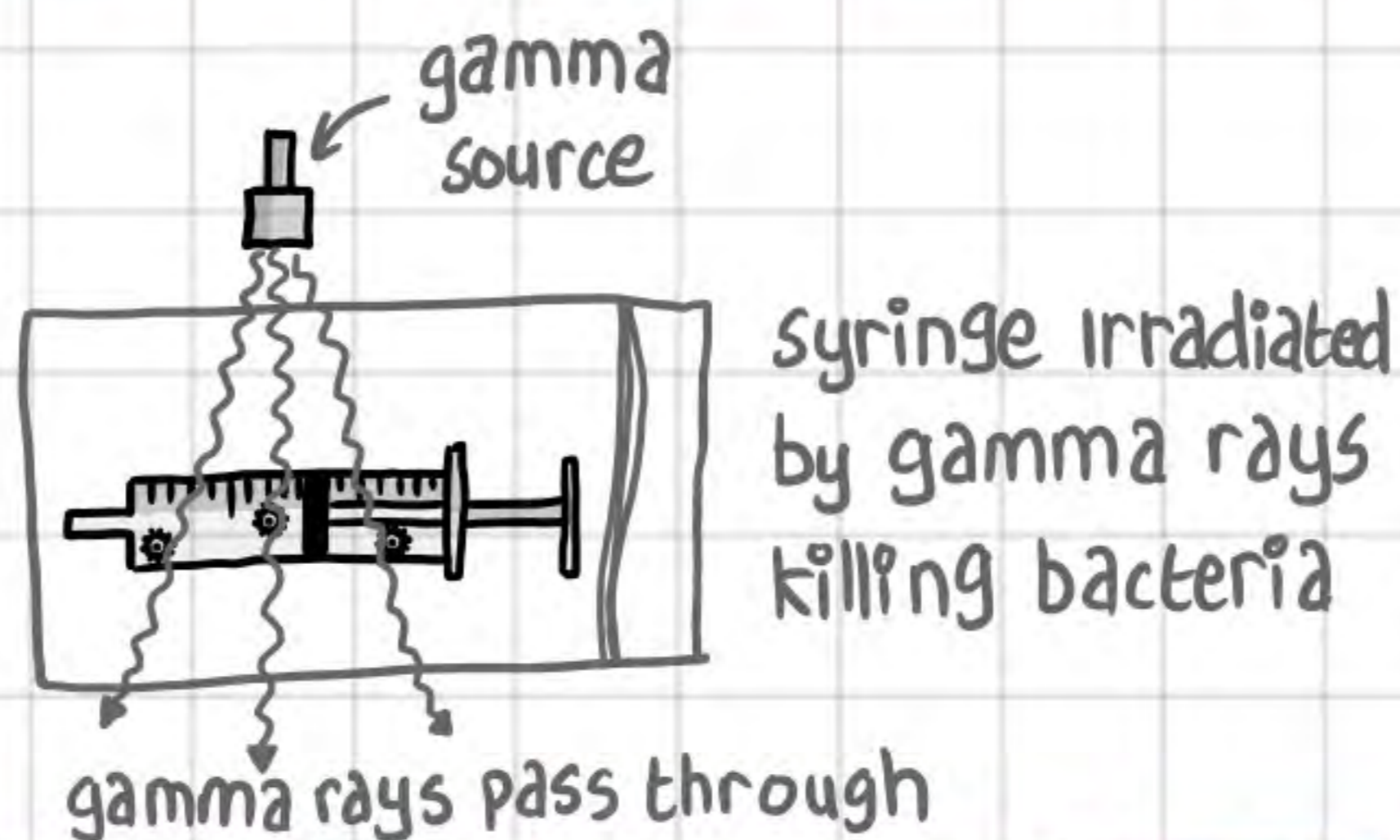
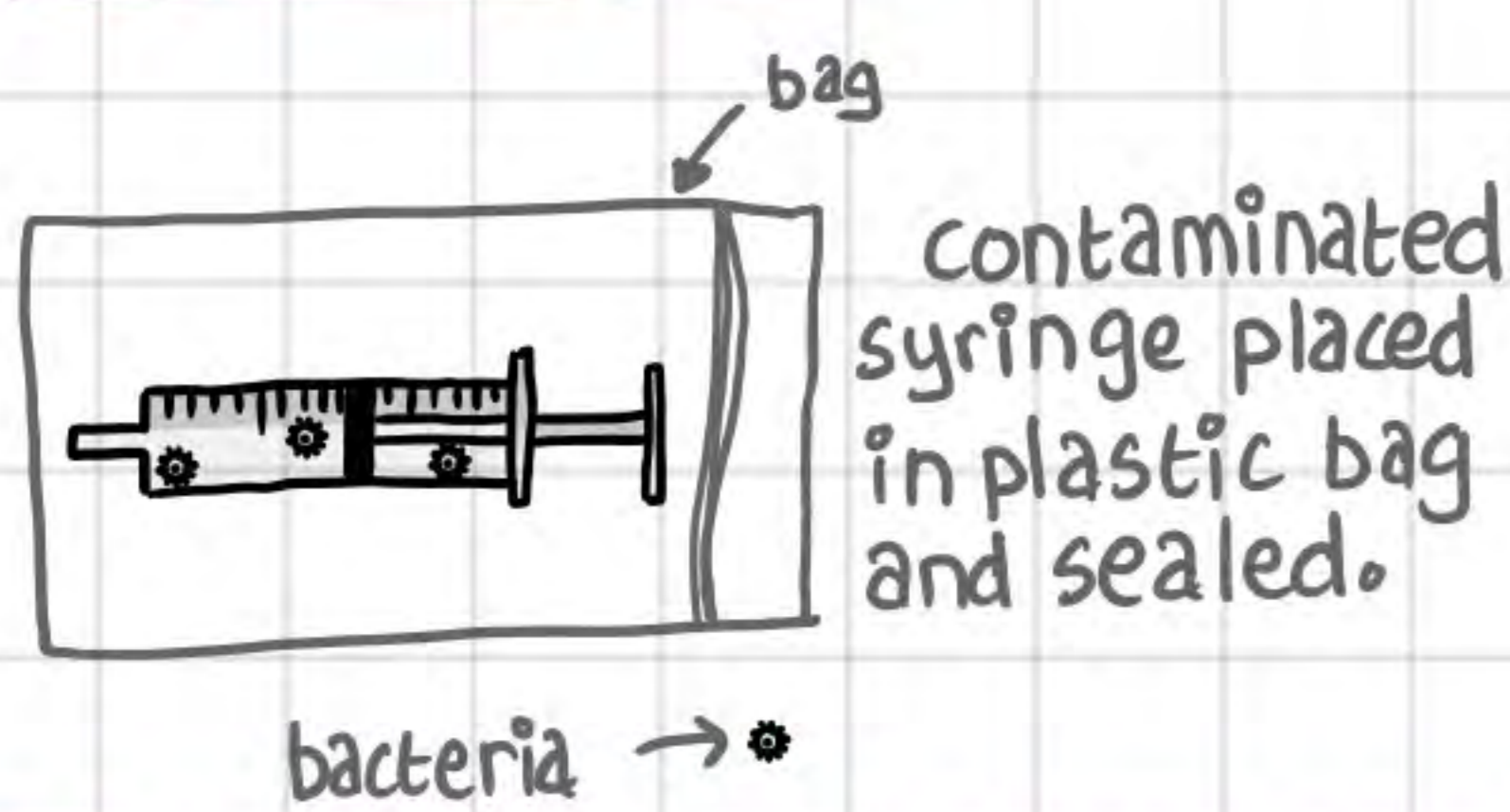
10 activity-time graph Extended answer



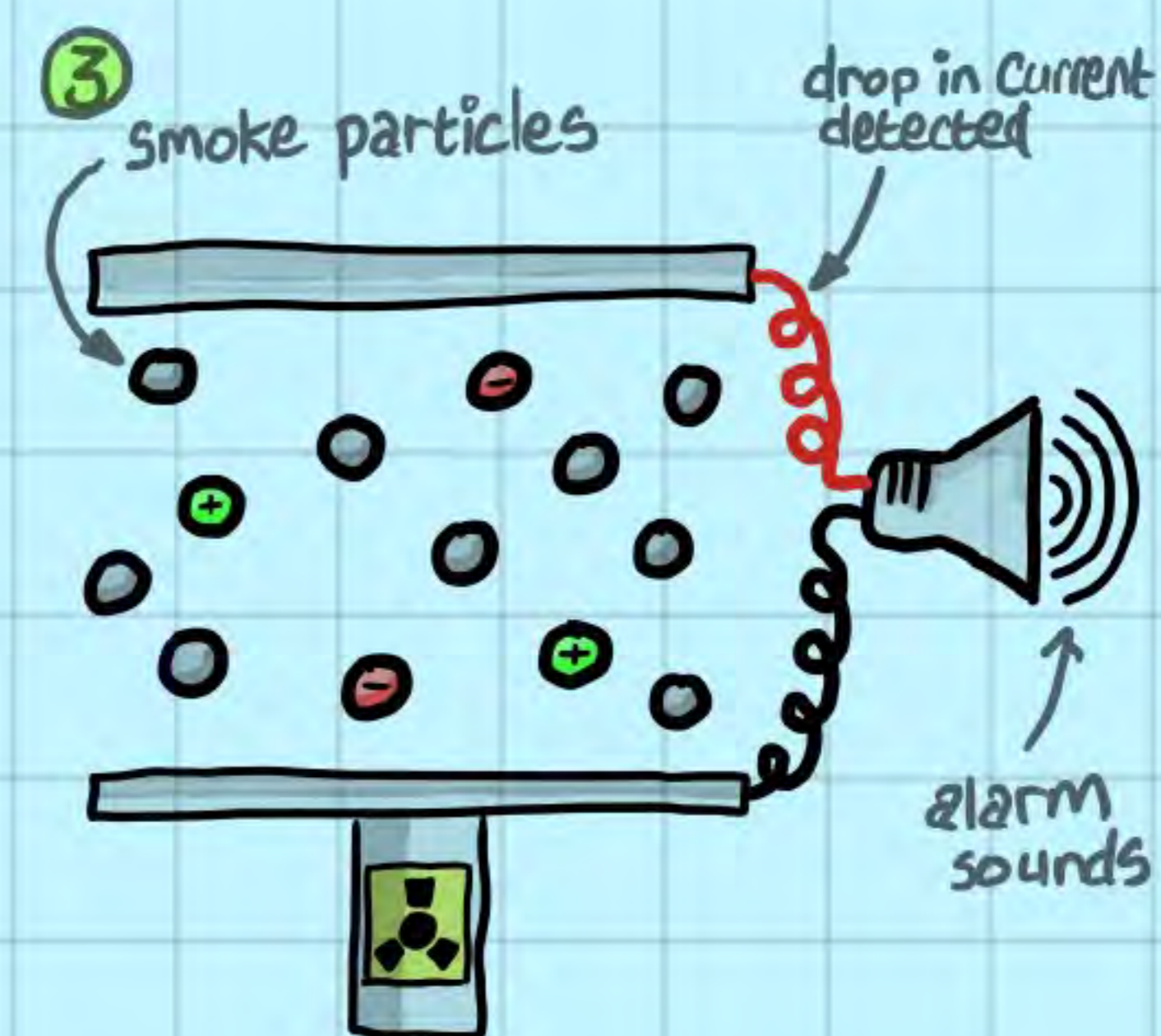
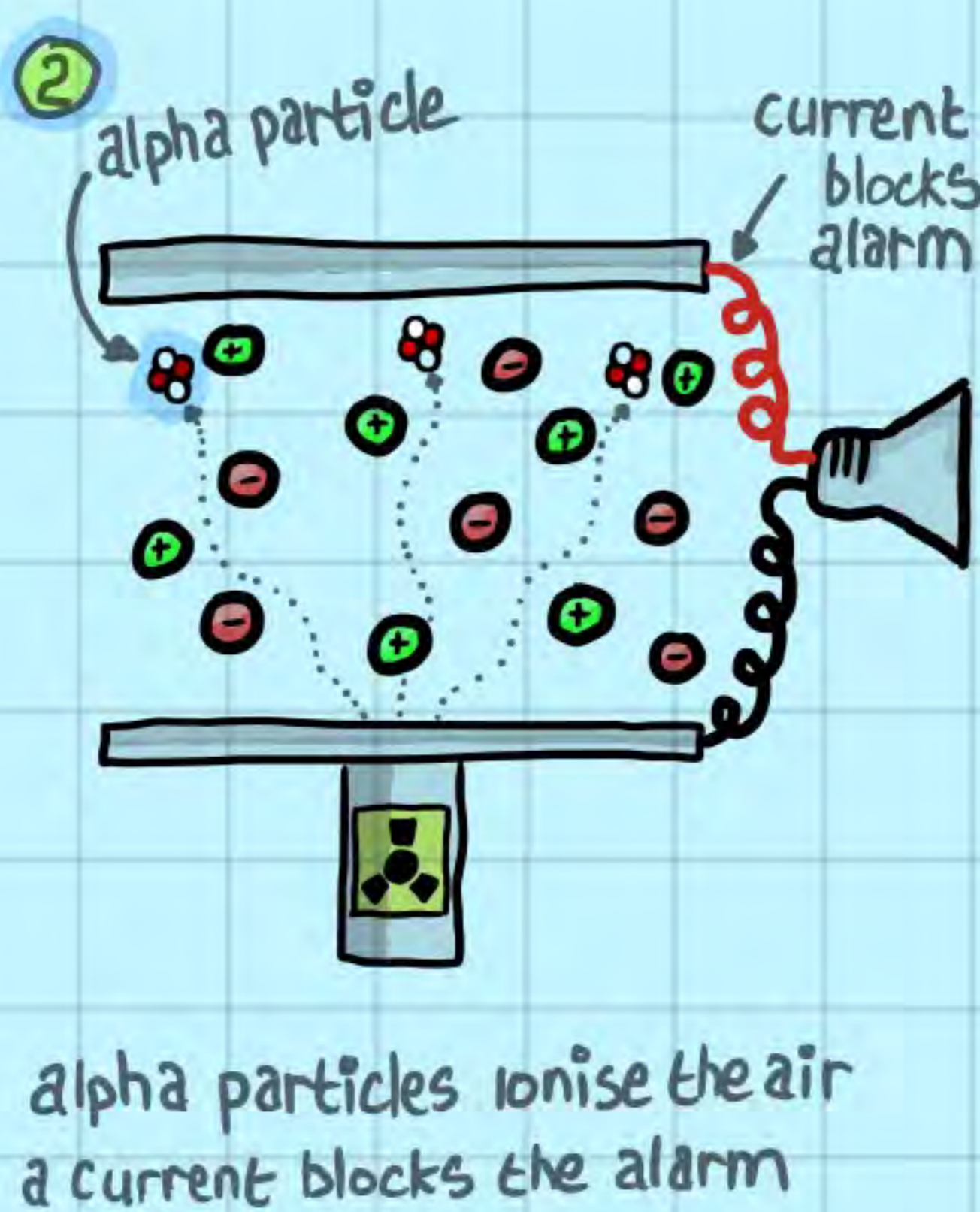
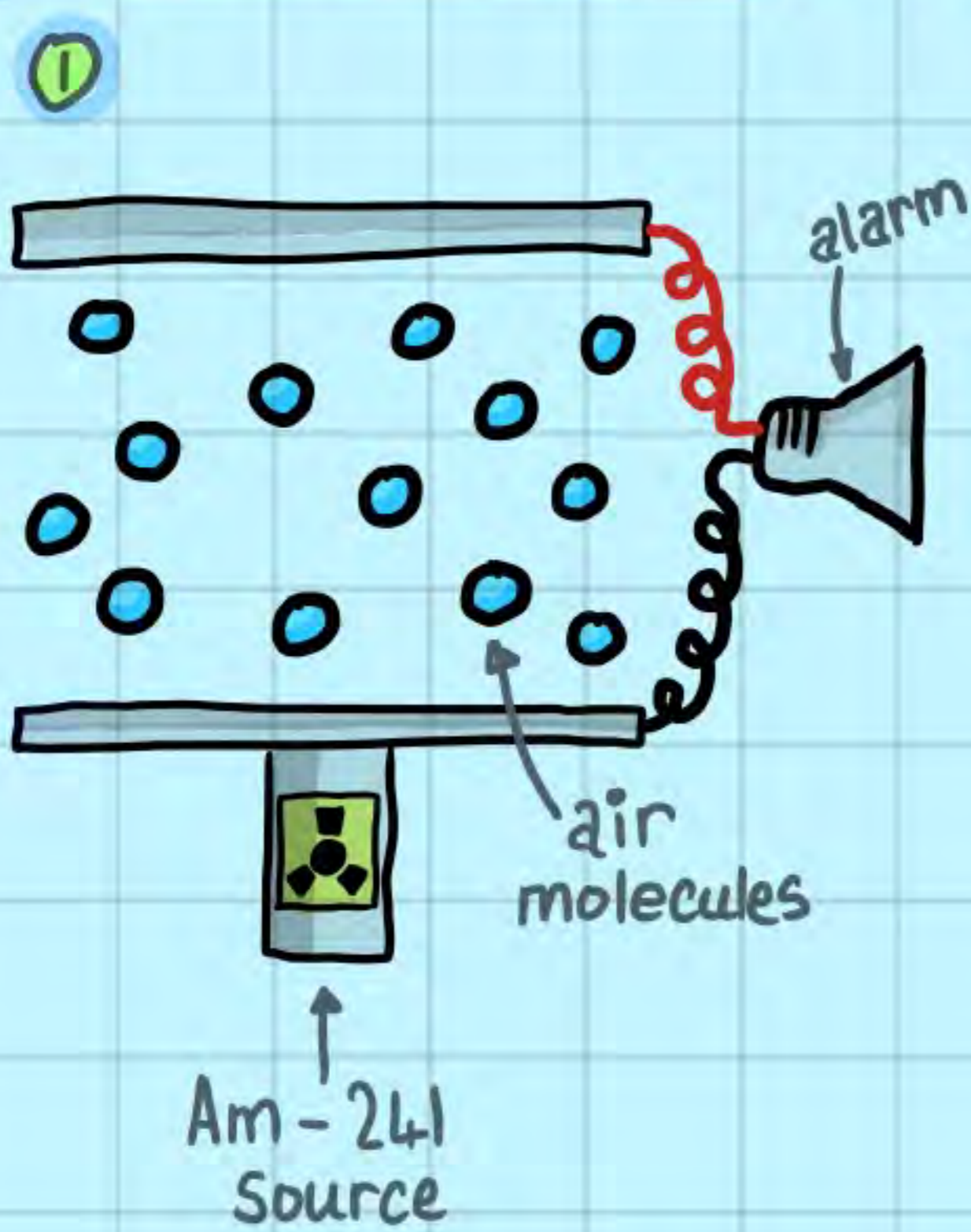
the half life hand



11 Sterilisation I



Smoke detectors 12



Smoke particles are not ionised. drop in current detected. alarm goes off.

Extended answer

13 Sterilisation II

- Describe how food can be sterilised using radioactivity.
- explain how bacteria are killed
 - explain why fruit is not radioactive.

