

YEAR 10 A-F - Physics

WEEK 10 (1st November to 5th November)

Topic: Radioactivity

Lesson Objective: SP 6i Dangers of radioactivity
SP 6j Radioactivity in medicine

Resources: Student text book, worksheet file, interactive power point from Board works and Online animations

Worksheets and Zoom link will be posted in google classroom

| Date | Lesson | Lesson objectives & Learning outcome | Mode of Teaching | |
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| <p>1st Nov Sunday (Boys)</p> <p>1st Nov Sunday (girls)</p> | <p>1</p> <p>2</p> | <p>L.O: Assessment</p> <p>SP 6c Electrons and orbits</p> <p>6d. Background radiation</p> <p>6e Types of radiations</p> <p>6f Radioactive decay</p> <p>6g Half life</p> <p>Learning outcome: assessing students knowledge in the given topics</p> | <p>Zoom</p> | <p>Assessment will be given in google form</p> |
| <p>3rd Nov Tuesday (Boys)</p> <p>4th Nov Wednesday (girls)</p> | <p>5</p> <p>5</p> | <p>L O: Describe the dangers of ionising radiation in terms of tissue damage and possible mutations and relate this to the precautions needed</p> <p>Explain how the dangers of ionising radiation depend on half life and relate this to the precautions needed</p> <p>Learning outcome: Students will be able to</p> <ul style="list-style-type: none"> • Describe the hazards of ionising radiation in terms of tissue damage | <p>Zoom</p> | <p>Teacher uses a powerpoint presentation to discuss the precautions taken in hospitals and other places using radioactive sources to reduce any potential harm to users and patients and link it to the half lives of the sources used and differentiate</p> |

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| | | <p>and possible mutations.</p> <ul style="list-style-type: none"> • Explain how the dangers of ionising radiation depend on the half-life. • Explain the precautions taken to reduce the risks from radiation and ensure the safety of patients exposed to radiation, and link these to the half-lives of the sources used. • Describe the differences between contamination and irradiation effects. | | between contamination and irradiation |
| <p>3rd Nov Tuesday (Boys)</p> <p>4th Nov Wednesday (girls)</p> | <p>6</p> <p>6</p> | <p>L.O: Compare and contrast the treatment of tumors using radiation applied internally or externally.</p> <p>Explain some of the uses of radioactive substances in diagnosis of medical conditions, including PET scanners and tracers.</p> <p>Learning outcome: Students will be able to</p> <ul style="list-style-type: none"> • Describe the advantages and disadvantages of treating tumours with radiation applied internally. • Describe the advantages and disadvantages of treating tumours with radiation applied externally. • Explain the use of radioactive tracers in diagnosis. • Explain the use of PET scanners in diagnosis. • Explain why isotopes used in PET scanners have to be produced nearby. | Zoom | Teacher uses a powerpoint presentation to discuss the use of radiation in treating tumors internally or externally citing the advantages and disadvantages of these treatments. Uses a video to explain the use of PET scanners in diagnosis. |
| <p>5th Nov Thursday (Boys)</p> <p>5th Nov Thursday (Girls)</p> | 4 | <p>L.O: Solve the worksheet posted GC</p> <p>Learning outcome: Students will be able to reinforce the concepts learned in the previous lesson by solving the worksheet</p> | GC | Teacher will post the worksheet in the google classroom. Students will solve and turn in the |

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| | 1 | | | worksheet |
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