# Open Awards Qualification Unit

This unit forms part of a regulated qualification.

## 1 Unit Details

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| Unit Title: | Radiation |
| QAC Code: | M/615/6323 |
| Level: | 1 |
| Credit Value: | 3 |
| Minimum GLH: | 27 |

## 2 Learning Outcomes and Criteria

| Learning Outcome (The Learner will): | | Assessment Criterion (The Learner can): |
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| 1. Know the structure of an atom | 1.1 | Give a definition for:<br>a) Atoms<br>b) Nuclei<br>c) Small molecules |
| | 1.2 | Illustrate a simple model of the atom including:<br>a) Protons<br>b) Neutrons<br>c) Electrons |
| 2. Know about the existence of isotopes | 2.1 | State what an isotope is as differences in numbers of protons, and neutrons related to masses |
| | 2.2 | Construct simple equations to represent isotope changes |
| 3. Know the principles of radiation | 3.1 | Outline, in terms of changes in nuclear mass and/or charge:<br>a) Alpha radiation<br>b) Beta radiation<br>c) Gamma radiation |
| | 3.2 | Give a definition of ionization |
| | 3.3 | State issues with radioactive materials, Including;<br>a) Half-life<br>b) Irradiation,<br>c) Contamination/ disposal<br>d) Hazardous health effects |

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| | 3.4 | State uses for different types of radiation, including:<br>a) Radion<br>b) Microwave<br>c) Infrared<br>d) Visible<br>e) Ultra-violet<br>f) X-ray |
| | 3.5 | State the key difference between nuclear fission and fusion |