

Prior Learning		Atomic structure – atoms contain protons, neutrons and electrons. Isotopes Conservation of mass in a reaction. Chemical equations and what happens in a chemical reaction.		
Lesson Number	AQA Spec	Title	Content	Assessment
1	4.4.2.1 4.4.3.1	Background radiation	Recall sources of background radiation. Describe how different types of radiation have different ionising power.	
2	4.4.2.1	Radioactive decay	Describe radioactive decay. Describe the types of nuclear radiation. Understand the processes of alpha decay and beta decay.	
3	4.4.2.2	Nuclear equations	Understand nuclear equations. Write balanced nuclear equations.	<b>Assessment 1:</b> Multiple choice Quiz 25 Marks  Feedback: Auto/Self-assessed
4	4.4.2.4	Irradiation	Explain what is meant by irradiation. Understand the distinction between contamination and irradiation. Appreciate the importance of communication between scientists.	

5	4.4.2.3	Radioactive half-life	Explain what is meant by radioactive half-life. Calculate half-life. Choose the best radioisotope for a task.	<b>Assessment 2:</b> Written assessment 15 Marks  Feedback: Teacher
	4.4.2.1			
	4.4.3.2			
6	4.4.2.4	Hazards and uses of radiation	Trilogy students do not need to know the content in the last section: Using medical tracers. Describe radioactive contamination. Give examples of how radioactive tracers can be used.	
7 <b>TRIPLE ONLY</b>	4.4.3.3	Uses of radiation in medicine	Compare gamma rays and X-rays. Describe some uses of nuclear radiation for medical diagnosis and therapy.	
8 <b>TRIPLE ONLY</b>	4.4.3.3	Using nuclear radiation	Explore the risks and benefits of using nuclear radiation. Describe how internal organs can be explored. Understand how nuclear radiation can control or destroy unwanted tissue.	
9 <b>TRIPLE ONLY</b>	4.4.4.1	Nuclear fission	Describe nuclear fission. Explain how a chain reaction occurs. Explain how fission is used.	
10 <b>TRIPLE ONLY</b>	4.4.4.2	Nuclear fusion	Explain nuclear fusion. Describe the conditions needed for fusion. Describe how nuclear fusion may be an attractive energy source.	
<b>End of Unit test Assessment: Teacher</b>				
<b>Where we will use these ideas again</b>		P6 – Gamma radiation		