

Promoting Independence at KS5



Student Name:		Teacher Initials:		Subject:	
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In order to be successful at KS5 you will need to do lots of independent learning and take accountability for your learning. These tasks will allow you to apply your learning to the real world and explore the impact of the theory and concepts you have been learning in your subjects.

You will find below some suggestions for activities you could do throughout the year. Some of them are one-off tasks, but some of them, such as watching news bulletins and reading magazines, should become regular habits. Keep this learning log and all your evidence. This independent learning will stretch and build on your capability in this subject.

Task (in no particular order)	Completed (date/s)	Evidence seen (date/s & teacher's initials)
<p><i>Task 1: Read one of these books:</i></p> <ul style="list-style-type: none"> • Periodic Tales: The Curious Lives of the Elements • The Science of Everyday Life: Why Teapots Dribble, Toast Burns and Light Bulbs Shine • Bad Science • Calculations in AS/A Level Chemistry • The Disappearing spoon 		
<p><i>Task 2: Watch one of these films:</i></p> <ul style="list-style-type: none"> • The Human Experiment (2013) • An Inconvenient Truth (2006) • A Civil Action (1998) • Erin Brockovich (2000) • The Insider (1999) 		
<p><i>Task 3: Watch one of these TED Talks</i></p> <ul style="list-style-type: none"> • How I claimed a seat at the Periodic Table https://www.ted.com/talks/clarice_phelps_how_i_claimed_a_seat_at_the_periodic_table • <i>Play with Smart Materials</i> Catarina Mota: Play with smart materials TED Talk • <i>Just how small is an atom?</i> Jon Bergmann: Just how small is an atom? TED Talk • <i>Battling Bad Science</i> Ben Goldacre: Battling bad science TED Talk • <i>How spectroscopy could reveal Alien life</i> Garik Israelian: How spectroscopy could reveal alien life TED Talk • <i>A Crash Course in Organic Chemistry</i> https://www.ted.com/talks/jakob_magolan_a_crash_course_in_organic_chemistry 		

<p><i>Task 4: Read these articles and make notes</i></p> <ul style="list-style-type: none"> • Using Plastics in the body https://www.stem.org.uk/resources/elibrary/resource/382317/using-plastics-body • <i>Catching a cheat</i> https://www.stem.org.uk/system/files/elibrary-resources/2017/03/Catching%20a%20cheat.pdf • <i>Diamond: More than just a Gemstone</i> https://www.stem.org.uk/system/files/elibrary-resources/2017/02/Diamond%20more%20than%20just%20a%20gemstone.pdf • <i>The Bizarre World of High Pressure Chemistry</i> https://www.stem.org.uk/system/files/elibrary-resources/2016/11/Catalyst27_1_the_bizarre_world_of_high_pressure_chemistry.pdf • <i>Microplastics and the Ocean</i> https://www.stem.org.uk/system/files/elibrary-resources/2016/11/Catalyst27_1_microplastics_%20and_the_oceans.pdf 		
<p><i>Task 5: Complete one of these Open Learn courses</i></p> <ul style="list-style-type: none"> • Birth of a drug - OpenLearn - Open University • Drug development process: combating pain - OpenLearn - Open University • Introduction to polymers - OpenLearn - Open University • Pain and Aspirin - OpenLearn - Open University • Test kits for water analysis - OpenLearn - Open University • The three-way catalytic converter - OpenLearn - Open University 		

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Below is a list of possible courses to extend your independent learning, recommended by your KS5 subject leader.

MIT – <https://ocw.mit.edu>

Course Number	Course Title
RES.8-007	Cosmic Origin of the Chemical Elements Supplemental Resources MIT OpenCourseWare
ES.287	Kitchen Chemistry Experimental Study Group MIT OpenCourseWare

MOOC - <https://www.my-mooc.com/en/>

Course Title	Provider
Exploring Everyday Chemistry My Mooc (my-mooc.com)	University of York
Science & Cooking: From Haute Cuisine to Soft Matter Science (chemistry) My Mooc (my-mooc.com)	Harvard University

Future Learn -

https://www.futurelearn.com/courses?filter_category=14&filter_availability=started&all_courses=1

Title	Link
Discovering Science: Medicinal Chemistry	Discovering Science: Medicinal Chemistry - Online Course (futurelearn.com)
The Science Behind Forensic Science	The Science Behind Forensic Science - Online Course - FutureLearn

edX - <https://www.edx.org/search?subject=Chemistry>

Title	Link
Electrochemistry	Electrochemistry edX

Coursera - <https://www.coursera.org/search?query=Chemistry&>

Title	Link
Introduction to Chemistry: Structures and Solutions	Introduction to Chemistry: Structures and Solutions Coursera
Chemical Biology	Chemical Biology Coursera