

## SCH4U Homework Assignments

Here is a comprehensive list of homework that will be assigned in this course.

- Please keep all your homework together in one binder section, neatly labeled with the numbers and headings given below. Your work will be monitored periodically.
- Homework completion is essential to your understanding of the course material, and is worth 10% of your final grade.
- Chapter and Unit Review questions are recommended – you do not have to complete all of them, they are meant as a self-assessment and skills-improvement tool. Solutions to these problems can be downloaded from the course website.

It is essential that you spend time outside of class contemplating the course material. Homework is designed to give you an opportunity to develop and practice new skills, and to learn new material being taught in the course.

Homework completion is not an option – it is crucial to your success in this course. Your homework completion will be evaluated based on the following rubric and is worth 10% of your final grade.

To facilitate this, your homework assignments must be on a separate sheet of paper, with clearly titled assignments. Be prepared to submit your homework with one day's notice.

### Homework Evaluation Rubric

	Level 1	Level 2	Level 3	Level 4
<b>Completeness /10</b>	Less than ½ of all items attempted or completed.	At least ½ of all items attempted or completed.	At least ¾ of all items attempted or completed.	All items attempted or completed.
<b>Knowledge and Understanding /5</b>	Work contains significant errors; little effort put into corrections.	Work has merit but may contain significant errors; some effort towards making corrections.	Work is largely correct.	Work is correct or has only minor, inconsequential errors.
<b>Communication /5</b>	Communicates information and ideas with limited clarity and precision.	Communicates information and ideas with moderate clarity and precision.	Communicates information and ideas with considerable clarity and precision.	Communicates information and ideas with a high degree of clarity and precision.
	Writing is not legible, items are out of order, work is generally messy.	Writing is not legible in places, some items are out of order, or work is generally messy.	Writing is legible, items are in order, work is generally neat.	Writing is legible, items are in order, work is exceptionally neat, orderly and presentable.
<b>Thinking and Inquiry /5</b>	Work does not address the question(s).	Work partially addresses the question(s) or gives some explanation.	Work addresses the question asked and provides a detailed explanation to support solution.	Work addresses the question(s) asked and provides a detailed and focused explanation to support solution. Key ideas are emphasized and only relevant information is included

## Unit 1 – Structure and Properties

### Big Ideas:

- The nature of the attractive forces that exist between particles in a substance determines the properties and limits the uses of that substance.
- Technological devices that are based on the principles of atomic and molecular structures can have societal benefits and costs.

Homework Number	Assignment	Complete	Level
1	- p.158-159 #5-9,11 - read ' Tao of Physics' excerpt; underline/highlight names, concepts		
2	- read text sections 3.1-3.4 - p.166 #3-5,11 - p.180 #1,2,5		
3	- read text sections 3.5-3.6 - p.191 #1,3,4 - p.194 #6-8,11		
4	- p.197 #4,9,10,13 - p.202 #1,2,5 - read text section 3.7		
5	- Chapter 3 Review: p.219 Self Quiz - p.220 #5,6,8,12,13,15,17 - read text p.207-208		
6	- p.227 #3-5 - p.229 #10,12		
7	- p.246-249 #2,3,9,10,11abf - p.250 #1-3		
8	- VSEPR – 10 Shapes		
[9]	- p.253-255 #1-3,6 (polarity),8,10 - p.256 #1		
10	- read text p.262-266 - p.264 #9,10	- p.260 #1-3 - p.266 #4,5,7	
11	- p.273 #2,3,5,7,8 - p.276 #3-6,9		
12	- Chapter 4 Review: p.281 Self Quiz - p.282 #3,5,7-10,14-22,25		
13	- Unit 1 Review: p.286 #1-40 (MC/TF) - p.288 #1,2,9,13,14,16,20,25,26,27,32		

## Unit 2 – Organic Chemistry

### Big Ideas:

- Organic compounds have predictable chemical and physical properties determined by their respective structures.
- Organic chemical reactions and their applications have significant implications for society, human health, and the environment.

Homework Number	Assignment	Complete	Level
1	- read text sections 1.1 and 1.2 - p.15-21 practice problems 1,2bce,4,5,6ace,7,8ace - p.22 #1-4		
2	- read text section 1.3 - p.27-30 practice problems 1-3,5,6 - p.31 #4		
3	- p.33-37 practice problems 1,2ac,6ace - p.37 #1,3		
4	- p.41-48 practice problems 1,2,4,5,7,8,11,13 - p.48 #3,4,6		
5	- p.51-56 practice problems 1-7		
6	- p.60-68 practice problems 1,2,5,11,12,14		
7	- p.72-77 #2-7		
8	- p.82 #1-4		
9	- Chapter 1 Review: p.95 Self Quiz - p.96 #1,2,5,7ace...,8ace...,14,16ab		
10	- p.102 #1-3 - p.107 #1,3,6,7 - p.113 #1,3,5		
11	- review text sections 2.4-2.7 - p.124 #4,6 - p.128 #2,3 - p.131 #1-5 - p.136 #1-5		
12	- Chapter 2 Review: p.145 Self Quiz - p.146 #1-3,10,11		
13	- Unit 5 Review: p.150 Self Quiz - p.152 #1-3,6-8,10,11,20,21		

### Unit 3 – Chemical Systems and Equilibrium

#### Big Ideas:

- Chemical systems are dynamic and respond to changing conditions in predictable ways.
- Applications of chemical systems at equilibrium have significant implications for nature and industry.

Homework Number	Assignment	Complete	Level
1	- p.428 #1-5 - read text section 7.1		
2	- p.437 #6,7 - p.438 #7		
3	- p.442-447 #1,2,4,6,7 - p.448 #1,4,6 - read text section 7.2		
4	- read text sections 7.3 and 7.4 - p.459 #6,10	- p.457 #1-4 - p.462 #3,4 (practice)	
5	- p.465-480 practice problems 2,4,6,7,10 - p.481 #5,7		
6	- p.486 #3,4 - p.492 #7,10,11	- p.489 #5 - p.493 #1,8,11	
7	- Chapter 7 Review: p.522 Self Quiz - p.523 #3-6,10,13,15,18,19		
8	- read text p.528-550, define bolds - p.532-549 practice problems 1,2,5,8,10,12,14,18		
9	- p.554-578 practice problems 4,6,7,10,13,14		
10	- p.588-591 practice problems 2,9 - p.594 #1-3,5		
11	- p.599-613 practice problems 1-3,5,6,7,10		
12	- p.620 #2,3 practice - p.620 #3,6,7		
13	- Chapter 8 Review: p.631 Self Quiz - p.632 #1,7,9,15,18		
14	- Unit 3 Review: p.636 Self Quiz - p.639 #1-4,6,7,11,12,17,21,22,32,33,35,38,40,41,45,50,52,57		



## Unit 5 – Electrochemistry

### Big Ideas:

- Oxidation and reduction are paired chemical reactions in which electrons are transferred from one substance to another in a predictable way.
- The control and applications of oxidation and reduction reactions have significant implications for industry, health and safety, and the environment.

Homework Number	Assignment	Complete	Level
1	- read text section 9.1 - p.653-662 practice problems 1-4,8,11,12-14,19		
2	- p.678-679 practice problems 10,15 - p.683-684 #5,6,9		
3	- p.700 #2,3,5-7		
4	- p.708 #10,11,6 - p.709 #3,7		
5	- p.714 #1-3,6,8,10		
6	- Chapter 9 Review: p.725 Self Quiz - p.726 #2-4,9,12,13,15,20,22		
7	- read text section 10.1, define bolds - p.735 #1-3		
8	- p.736 #2,4-7 - p.741-744 practice problems 3-5,9 - p.746 #4,6,8		
9	- p.751 #8 - p.752 #9,10		
10	- Chapter 10 Review: p.759 Self Quiz - p.760 #1,2 ( <u>not</u> 3-5), 6a,7-10,13,15		
11	- Unit 4 Review: p.764 Self Quiz - p.766 #1,3,4,13,16,18,24,26-28,31,32,34		