**Strand 2: Quantitative and Aqueous Chemistry**

Lesson 3 of Week 8: **Diluting solution and Acid-Base Titration**

Resource: Esa study Guide, Level 2 Chemistry, Chapter 3 & 4

The learning outcomes targeted in this activity are provided in the table below,

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| **SLO #** | **SPECIFIC LEARNING OUTCOMES (SLO):**  | **SKILL LEVEL** | **SLO CODE** | **ACHIEVED (put a tick)** |
| 1 | List/label the apparatus commonly used in a titration | 2 | 12Che2.1.2.6 |  |
| 2 | Carry out a titration and report on the process and result in an acceptable format | 4 | 12Che2.1.3.7 |  |
| *3* | Describe the colour changes of common indicators, methyl orange and phenopthalein at the end point of a titration | 3 | 12Che2.1.1.5 |  |
| *4* | Discuss the results from the titration with respect to sources of errors and its effect on the determination of unknown concentration.  | 4 | 12Che2.1.4.4 |  |

Activity

1. List/label the apparatus commonly used in a titration (from video or textbook)
2. Carry out a titration and report on the process and result in an acceptable format. Note: watch a video on acid-base titration. The result will be done together when classes resume.
3. Describe the colour changes of the common indicators at the end point of a titration
	1. methyl orange
	2. phenolphthalein
4. Discuss the results from the titration with respect to sources of errors and its effect on the determination of unknown concentration. Note that this will be done together when classes resume.