

- The Effectiveness of learning the Context-Based Chemistry in The Chemical Literacy among The First-Grade Secondary Stage Students.

ABSTRACT

The present study aimed at investigating the effectiveness of learning the context-based chemistry in the chemical literacy among the first-grade secondary stage students. A unit in "Acids and Bases" and a teacher's handbook were prepared according to the context-based chemistry approach for the first-grade secondary stage students. Scientific literacy test was developed and administered on a sample of 30 female students (experimental group) in the first-grade secondary stage students. 31 female students studied the same topic according to the common and familiar method (control group). The test was applied to the two groups and the findings showed that:

- 1) There was a statistically significance difference at 0.01 between the scores means of the experimental group and those of the control group in the main chemical literacy dimensions included in the chemical literacy test and the whole score,, in favour of the former.
- 2) There was a statistically significance difference at 0.01 between the scores means of the experimental group and those of the control group in the chemical literacy sub-dimensions included in the chemical literacy test and the whole score, in favour of the former..
- 3) The suggested unit in "Acids and Bases", which has been developed according to the context-based chemistry approach, was effective in developing the chemical literacy among the first-grade secondary stage students.

- **Keywords:** Unit in context- based chemistry — chemical literacy — chemistry curriculum — secondary stage — content knowledge — procedural knowledge — epistemic knowledge.
