

1. Teacher's Comments (English)

- [00:00:00](#) General Comments: This is a lesson that summarizes an experiment titled "The Role of Saliva." While recalling the details of the experiment (the breakdown of starch into sugar through saliva) from the previous lesson, we established the objective of today's lesson, which is to understand the following theory and conclusion:
1. By looking at the result from the reaction of the iodine, see that starch no longer exists as starch.
 2. From observing the reaction of the Benedict's solution, find that starch turned into sugar.
- [00:00:27](#) At the beginning of the lesson, we always confirm the objective of the day. This is because I have rationalized that if each and every student is conscious of the objective throughout the lesson, it helps to establish a positive outcome.
- [00:00:54](#) Just before the experiment, I make sure to prepare a report, but I also put time into directing the students' note taking. This is because I wish for the students to be aware that the notes they take are valuable and an integral item in their references.
- [00:01:55](#) There was a lot of repetition of difficult and important vocabulary—especially those words that do not play a role in the students' daily lives.
- [00:02:23](#) This experiment saw the first use of Benedict's solution in this unit. Benedict's solution was also a key item in the observations; therefore I made sure to carefully direct the students' through its use as a scientific term and as a physical chemical, as well as in the reading of the results it produced.
- [00:03:01](#) I am not sure how many students actually comprehended this explanation, but in order to give the students some visual image, I used some exaggerated expressions in my explanation.
- During the first five minutes, I reviewed what was covered in the last lesson, introduced what specifically would be today's lesson topic (objective), and went over difficult vocabulary. These are tasks that help to arrive at the objective of the lesson.
- [00:04:58](#) I made my rounds to each group and gave them individual assistance. When I thought about the lesson up to this point, I came to the realization that the students, although having actively participated in the experiment, did not understand what to look for in their observations. I wanted to strengthen the students' ability to make acute observations through individual guidance, one student at a time.
- [00:07:10](#) "Conditions of the Experiment": The science experiments in elementary and junior high schools are mostly experiments of comparison. I directed the students by applying these words so that they will be aware of drawing out the observations and the conclusions by comparing two or more phenomena.
- [00:13:59](#) Experiments by students involve mistakes. It is important to come to conclusions by evaluating your own data as well as others. I used the results of another class to show the students some good examples.
- [00:24:01](#) I tried to create a comfortable environment for the student presentations by clearly explaining that the important part of a presentation is the result of the experiment. Junior-high students are often consumed with the idea of being embarrassed by making

a mistake, and they do not want to actively participate in presentations. I tried to create an atmosphere that said, "It is okay to make mistakes."

[00:25:00](#) For the lessons in which group presentations were essential, I made sure to provide the opportunity for all groups to give presentations in each unit. I wanted to work up their volition and confidence in their studies through this experience of "I presented in front of everyone."

[00:29:34](#) Since this is an experiment that gets its results from the colors of reagents, I wanted to prepare all the reference materials in color. I wanted the transparency to be in color as well, but I didn't have the resources to make that happen.

[00:31:05](#) As an instructor, I organized the conclusions for today's lesson, but the important aspect was to conduct the lesson in such a way that the students could come up with their own conclusions.

[00:32:20](#) I presented various experimental results to the students. Though each result differed slightly from another, I explained that it is still possible to reach the same conclusion. Also, I presented one reference material with results that were humorous even though there was little connection to the lesson's objective. The students were able to recognize the humor in that reference, which led me to believe they actually understood the real objective of the lesson.

[00:33:56](#) By making the point of the presentation clear to the students, I wanted to lighten the weight of the pressure on the students for the presentation. The students had the impression that the summary was difficult, and they did not want to present it.

[00:36:46](#) At this point all groups have finished their presentations, but I made sure to give a word of praise to each group. I did this to heighten the students' volition to present for the next time.

[00:39:49](#) I conducted the summary by emphasizing the importance of the vocabulary used to describe the conclusion that was drawn by examining the results. The knowledge was established.

[00:41:04](#) We summarized the lesson by using the textbook. Students read the textbook, underlined essential vocabulary, and took notes individually from the blackboard. By following this structure, I established the learning objectives and students' understanding. I made sure to have the students summarize all the important vocabulary words in their notebook.