3.15 Chemistry

MAN Pui Sum

(I) Ultimate Goals
Through the learning of Chemistry, a student should be able:
- to develop a self-learning ability;
- to acquire a basic knowledge of Chemistry;
- to think independently and scientifically;
- to be aware of the social, economical, environmental and technological implications of chemistry
- to become a responsible citizen in a changing world.

(II) Short Term Objectives
1. To teach students to have the knowledge and the understanding of:
   - chemical vocabulary, terminology and conventions;
   - selected facts, phenomena, practical techniques, laws, principles, theories and concepts in chemistry and their limitations, and
   - relevant applications of chemistry in society and daily life;
2. To raise the pass percentage of both the HKAL and HKCEE examination results
3. To prepare F.3 and F.5 students for the change of medium of instruction from Chinese and English.
4. To assist F.4 and F.6 students to adapt to the change of medium of instruction to English.

(III) Internal Analysis
Strengths
- Visits to universities and factories are arranged to arouse students’ interest and their awareness of the practical applications of chemistry.
- The laboratory is well maintained by an experienced and responsible laboratory technician.
- Various kinds of assignments such as projects and collection of newspaper clippings are given to students to make learning Chemistry a joyful experience.
- Short quizzes and tests are given frequently to students to reinforce their concepts and memory. Teachers can also become aware of the weaknesses of the students on certain topics.
- The school has been supportive to use information technology. Teaching aids like C.D.Roms and videos are available for illustration of abstract concepts such as atomic structures, electronic excitation between various energy levels and electrochemistry with vivid animation.

Weaknesses
- Students of F.4 and F.6 have to adapt to the change of medium of instruction from Chinese to English. Students are weak in English. They have great difficulties in understanding and expressing their own views on daily chemistry issues. Most of the students (even up to F.7) have low self learning abilities and have to work under supervision.
(IV) Implementation Plan

1) To raise the pass percentage of both the HKAL and HKCEE examination results by:
   i) ensuring that students have sufficient practice of pass papers,
   ii) organizing supplementary lesson once a week, students will be assigned class work such that teachers can offer immediate assistance to students, and
   iii) giving tests after finished teaching every two topics.

2) To prepare F.3 and F.5 students for the change of medium of instruction from Chinese to English by:
   i) Teaching students the corresponding English terms/chemical names and formulate,
   ii) Providing supplementary English notes and exercises to students
   iii) Organizing supplementary lessons after the final examination of F.3 students and the mock examination of the F.5 students.
   iv) Showing students with some English “Chemistry” educational videos not only to arouse students interests in chemistry but also to give students more chances to expose to English.

(V) Major policies

All teachers should attend not less than one public seminar with a view to improve their teaching skills and to update themselves for the latest development in the field of Chemistry.

F.3 and F.4 students should be able to master English chemistry vocabulary, terminology and conventions, although the medium of instruction of the subject is Chinese.

Teachers should use I.T. in teaching and be familiar with the use of the internet to retrieve latest information in science and technology.

(VI) GANTT CHART

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<thead>
<tr>
<th>Activity</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
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<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Budget</th>
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</thead>
<tbody>
<tr>
<td>1. Short Quizzes/Tests</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>2. Supplementary lesson for F.5 students once a week</td>
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<td>3. Bridging course for F.3 students</td>
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<td>4. Bridging course for F.5 students</td>
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<td>5. Visit to Universities &amp; attend the “Olympaid” Chemistry Presentations</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Travelling allowance at $1,500 per trip</td>
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<td>6. Newspaper clippings</td>
<td>✓</td>
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<td></td>
<td>Project, Presentation</td>
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<td>Purchase of chemicals, materials for board display ~ $2,000</td>
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<td>F4 &amp; F6</td>
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<td>8.</td>
<td>Scrutiny of exercises/tests/workbook</td>
<td>✓</td>
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<td>F.5 &amp; F.7</td>
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<td>9.</td>
<td>To improve teaching strategies: by using audio-visual aids and the latest available computer learning aids</td>
<td>✓</td>
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<td>Teaching aids and reference books for teachers and students for a total of $4500.</td>
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