I) Situational Analysis

(a) Strengths
1. The subject-teachers have been capable and constructive enough in developing ideas to suit students’ needs and arouse students’ curiosity in productive ways.
2. The laboratory technician has been very cooperative and highly supportive in trying out new experimental ideas.
3. The laboratory is well-equipped with IT facilities to enhance students’ interactive learning.
4. The sufficient provision of laboratory apparatus enables students to have direct experience in performing scientific investigations.

(b) Weaknesses
1. Students are generally weak in internalizing theme connections and transferring skills learnt across contexts and subjects.
2. Some F.2 students have weak academic foundations in the subjects, and some other F.2 students are too exam-oriented.
3. Some F.1 students, who have been deeply immersed in traditional learning pattern, may not be confident enough to engage themselves in the process of investigation.
4. Some F.1 students who may not be accustomed to EMI teaching may have difficulties in reading the text materials and expressing themselves in English.

(c) Opportunities
1. Collaborative teaching with English Department in guiding F.2 students’ discussion sessions during the lessons, so that students can be trained with more compatible with EMI teaching, including the confidence to express themselves in English.
2. Students’ horizon can be broadened by individual or group presentations, visits and some competitions.

(d) Threats
1. Due to the implementation of NSS curriculum, the F.1 and F.2 Integrated Science syllabus will be amended accordingly.
2. Obvious contradiction existed between the 2 types of students: the low-motivated and exam-oriented ones.
(II) Operational Strategy

(a) Major Concern 1: Enhancing teaching professionalism

<table>
<thead>
<tr>
<th>Targets</th>
<th>Strategies</th>
<th>Success Criteria</th>
<th>Methods of Evaluation</th>
<th>Time Scale</th>
<th>People in charge</th>
<th>Resources Required</th>
</tr>
</thead>
</table>
| 1.1 Strengthening teachers’ competency in knowledge and skills in implementing NSS curriculum | *To encourage panel members to attend seminars or workshops related to NSS organized by different organizations  
*To encourage panel members to share the innovative ideas after the seminars or workshops | *Each panel member attends at least ONE seminar/ workshops/ course related to their own science subject.  
*Teachers introduce innovative ideas in their teaching.  
*Teachers share the innovative ideas with their colleagues  
*Keep record of staff training | *Teachers’ feedback  
*Attendance records | Sept. – June | ALL | EDB Training calendar |
| 1.2 Enhancing the interflow and collaboration among teachers of the same subject across one form of studies | *The preparation meeting is newly planned for all panel members discussing the rationale and objectives of delivering the lessons before each chapter | *Every panel member can participate over 70% of the preparation meetings. *The preparation meeting for each new chapter is held before teaching, approximately 1.5 months for one meeting. *Teachers take turns in preparing teaching materials (such as notes, glossary, experiment set up, etc.) *A folder had been saved in Public for sharing teaching materials | Sept. – June | ALL | Teachers’ time, Reference materials |
1.3 Implementing peer observations among staff members of the same subject

- Peer observations among panel members will be conducted once per term
- Good and innovative methodologies and information can be genuinely shared among members.
- Difficulties can be shared among members
- Teachers’ feedback
- *Keeping records of lesson evaluations after observation for reference.

Sept. – Dec
Feb – May
ALL

(b) Major Concern 2: Enhancing teaching pedagogy

<table>
<thead>
<tr>
<th>Targets</th>
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<th>Time Scale</th>
<th>People in charge</th>
<th>Resources Required</th>
</tr>
</thead>
</table>
| 2.1 Devising teaching strategies for consolidating learning in junior form studies and bridging students to NSS learning | *Frequent discussions with the panel head of Physics, Chemistry and Biology in bridging students to NSS learning *
*Essay writing, report writing, project, presentation skill learning and useful website will be introduced to the students. | *Over 70% Students give reflective output showing development of communication, creativity, critical thinking and problem-solving skills (3C1P) | *Students’ feedback | Sept. – June | ALL | Teachers’ time, Reference materials |
| 2.2 Devising teaching strategies to cater for diversified learning needs within one class | *Challenging questions will be given after every lesson.  
*Smaller group size (4-5 reduced to 2-3 students per group) will be arranged in specific experiments to facilitate maximum first-handed experiences and to cater learning diversity  
*Co-teaching in F.1 for the 1st and 2nd experimental lessons. | *Over 30% of students tried to answer  
*Over 80% of students show interest in doing experiments  
*All students acquire the basic skill taught  
*Teachers’ and students’ feedback  
*Feedback after the lesson observation | *Sept. – June  
*1st and 2nd experimental lessons in Sept. | *A question bank of Challenging questions will be formed  
*With the help of Lab. Technician and teachers |
| 2.3 Organizing a variety of learning activities outside classroom/after classroom teaching to arouse students’ interest, motivation and participation | *With the help of the science society, museum visit, universities labs visits, visit to Ocean Park, etc are arranged in due course  
*Talk on wetland will be arranged in Hall Assembly and display board about wetland will be exhibited in the cover playground | *Over 70% students enjoy the programme  
*There will be two visits throughout the year.  
*Science society committees’ feedback  
*Teachers’ and students’ feedback | 7th October  
HSS | *With the help of the science society.  
*With the help of Biology department, HK Wetland Park |
2.4 Implementing systematic planning and delivery in conducting lessons

* State the lessons objectives at the start of the lessons
* 5 minutes for spellothon and brief review of last lesson
* Each experiment followed by conclusions and reflections
* 5 minutes will be reserved for ending up with conclusions and a challenging question
* Concept map drawing after each chapter which will be linked up with the previous one.

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</tr>
</thead>
</table>
| 3.1 Enhancing students language proficiency through implementing reading across the curriculum, school MOI policy across curricular and activities outside the classroom | *Collaborate with School Library in promoting science reading and healthy net surfing
* Make good use of ‘Wisenews’, Discoveryeducation and Electronic book on web
* Collaborate with English Department in F.2 in guiding students’ discussion sessions during the lessons | *Students had borrowed at least one book from the school library.
* Over 70% Students cultivate good reading habits and share information outside textbooks, and are confident in communicating effectively in English. | *Statistic on borrowing book from the school library
*Teachers’ and students’ feedback | *Sept. – June
*Feb | HSS | Library, Wisenews, Discovery-education, electronic books on web |

(c) Major Concern 3: Enhancing learning effectiveness
### 3.2 Implementing goal setting, pre-lesson preparation, reflective learning and revision skills in various subjects to promote self-directed learning among students

**Make good use of the Self learning journal**

*Over 60% students feel that they are more self-directed in learning with the use of the self learning journal*

*Students’ feedback*

**Performance of checking the Self learning journal**

*Sept. – June*  
**HSS**

Single-line exercise book

| *N.A.* | | |

| *Arrange more scientific investigations and problem solving activities; followed by oral presentation. Feedback from teachers and peers will be given.*  
| *Interesting Experiments or book sharing*  
| *Listing out top 5 students and those students showing improvement after every quiz or exam.* | | | |

### 3.3 Enhancing students’ critical thinking skills in junior form humanities subjects (LS, Geog, Hist & CHist)

**N.A.**

### 3.4 Strengthening students’ confidence and positive attitudes in learning through recognition, encouragement, participation and feedback

**Arrange more scientific investigations and problem solving activities; followed by oral presentation. Feedback from teachers and peers will be given.**  
**Interesting Experiments or book sharing**

*Students show interest, confidence and positive attitudes in complete the assigned tasks.*  
*Over 70% students participate actively in sharing sessions and complete the assign tasks*  
*Over 70% students can be able to share at least once in the class*  
*Students show initiative to strive for improvement*

*Teachers’ and students’ feedback*

*Statistics and analysis of the quizzes and exam.*

*Sept. – June*  
**ALL**

A3 paper, Colour Markers
<table>
<thead>
<tr>
<th>3.5 Enhancing students’ communications skills and creativity through the campus TV</th>
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</thead>
</table>
| *Video taping on interesting experiments, innovative ideas, project presentations or discussion on current issue such as drug abuse through the campus TV. If possible the video will be broadcasted during form time.  
*Carry out debate/role-play activities on controversial science-related issues of personal and public concern. |
| *At least one entry from each class  
*Students learn to view the same issue with different perspectives and are open to ideas.  
*Students show tolerance and respect towards different opinions, viewpoints and bare Christian value |
| *Teachers’ and students’ feedback |
| *Sept. – June |
| ALL |
| campus TV, digital camera, digital video |

<table>
<thead>
<tr>
<th>3.6 Equipping students well with skills and knowledge in public examinations</th>
</tr>
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<tbody>
<tr>
<td>*N.A.</td>
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## (d) Major Concern 4: Implementing assessment for learning

<table>
<thead>
<tr>
<th>Targets</th>
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<th>People in charge</th>
<th>Resources Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Adopting more flexible and diversified assessment methods to recognize the different potentials and abilities of students</td>
<td>*Carry out assessment on a regular and continuous basis</td>
<td>*Over 80% students can get a pass</td>
<td>*Over 80% students can get a pass</td>
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<tr>
<td></td>
<td>*Carry out assessment on the regular practical work during the lessons</td>
<td>*Over 70% students take teacher’s feedback as advice for improvement</td>
<td>*Teachers’ and students’ feedback</td>
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<tr>
<td></td>
<td>*Conduct practical tests for skills assessment</td>
<td>*Over 80% students can get a pass</td>
<td>*Examination analysis</td>
<td>*Sept. – June</td>
<td>ALL</td>
<td>F.4 student helpers, Laboratory apparatus, A list of assessment criteria</td>
</tr>
<tr>
<td></td>
<td>*Conduct oral tests for English proficiency in science learning assessment</td>
<td>*Over 70% students acquire a stronger sense in monitoring their own learning progress</td>
<td>*Performance analysis</td>
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<tr>
<td></td>
<td>*Carry out student’s self assessment on each topic</td>
<td>*Over 70% students become stronger in self-reflecting and judging abilities</td>
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<td></td>
<td>*Incorporate self- and peer-assessment in project work</td>
<td>*Over 80% students can get a pass</td>
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</tbody>
</table>
| 4.2 Promoting the use of appropriate and clear teacher feedbacks for improvement in learning | *Immediate feedback as advice for improvement after practical work during the lessons.*  
*Written Comments as advice for improvement in the self learning journal.*  
*Interview with the students after the chapter quizzes or exam. about their strengths and weaknesses.* | *Over 70% students bare a stronger sense in monitoring their own learning progress.*  
*Teachers’ and students’ feedback* | *Sept. – June*  
*ALL* | A list of assessment criteria |
|---|---|---|---|---|
| 4.3 Devising the assessment content and expectation for gradual bridging to NSS curriculum | *Essay writing, report writing, project, presentation skill learning and useful website will be introduced to the students.* | *Over 70% Students give reflective output showing confident in NSS learning.*  
*Students’ feedback* | Sept. – June  
ALL | Teachers’ time, Reference materials |
| 4.4 Stipulating in junior form assessments the proportions addressing to communication skills | *5% of assessments addressing to communication skills, including oral presentation after group discussion, oral presentation of the group project, and essay writing* | *Over 70% students can get a pass total mark (2.5%) in the part of communication skills.*  
*Teachers’ and students’ feedback*  
*Performance analysis* | Sept. – June  
ALL | A3 paper, Colour Markers |
<table>
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</table>
| 1. Reading to learn     | *Provide students science-related newspaper clippings and article readings with reflective questions
*Collaborate with School Library in promoting science reading and healthy net surfing
*Make good use of ‘Wisenews’, Discoveryeducation and Electronic book on web | *Students had borrowed at least one book from the school library.
*Over 70% Students acquire broaden knowledge and cultivate good reading habits
*Over 70% students can be able to share a book at least once in the class | *Statistic on borrowing book from the school library
*Teachers’ and students’ feedback | *Sept. – June
*Feb | HSS | Library, Wisenews, Discovery-education, electronic books on web |
| 2. IT in interactive learning & teaching | *Facilitate the use of e-platform for performing on-line assessments and concept map making | *Students assess their learning independently in an informal setting at their own pace | *Teachers’ and students’ feedback | *Sept. – June | ALL | IT support |
### 3. Project learning

<table>
<thead>
<tr>
<th><strong>3. Project learning</strong></th>
<th><em>Mini-scale project with hands-on activities for F.1 students</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Cross-curricular with HE on the topic: acid and alkaline for F.2 students</em></td>
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<tr>
<td></td>
<td><em>Collaborative science project (with computer, visual art, HE and D&amp;T) for F.2 students</em></td>
</tr>
<tr>
<td><em>Students design and make artefact for particular purposes</em></td>
<td><em>Students develop science process skills through first-hand investigation</em></td>
</tr>
<tr>
<td><em>Students make use of the technique and knowledge learnt in visual art, HE and D&amp;T.</em></td>
<td><em>Teachers' and students' feedback.</em></td>
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<td><em>Students’ Questionnaire</em></td>
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<td><em>Feb. – May</em></td>
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<td><em>Sept – Dec.</em></td>
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<td><em>Feb. – May</em></td>
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**Form-coordinators**

**IT support**
### 4. Integrating moral and civic education

- Carry out debate/role-play activities on controversial science-related issues of personal and public concern
- Introduce viewpoints of Christian scientists
- Integrate case-study decision making exercises on issues related to community, local and global environments
- Planting competition
- Science visit

*Students learn to view the same issue with different perspectives and are open to ideas.
*Students show respect and tolerance towards different opinions and viewpoints.
Students make informed and responsible judgements based on scientific evidence.
*Students commit to healthy lifestyles, and environmental-friendly practices.

### 5. Administration

- Subject panel duty

*Get paper work done properly
*All documents can be submitted on or before the deadline.

### III. Team Members (09 - 10)

1. Mrs. Choo Ho So Sheung (HSS) [Panel Head]
2. Miss Chiang Man Ling (CML)
3. Mr. Fu Chong Kuen (FCK)
4. Mr. Ho Chi On (HCO)
5. Mr. Wong Chi Hung (WCH)