MARIANOPOLIS COLLEGE

SCIENCE PROGRAM: OBJECTIVES & GOALS

1. **SCIENTIFIC VOCABULARY**
   - To understand the technical and scientific vocabulary and use it correctly in oral and written communication

2. **LAB SKILLS AND INSTRUMENTATION**
   - To be able to understand and use scientific instruments correctly in the laboratory, and present experimental data for analysis

3. **GRAPHICAL REPRESENTATION**
   - To represent data and results graphically and be able to understand and interpret graphical information

4. **OBSERVATION AND ANALYSIS**
   - To observe and gather data
   - To make and test inferences based on the data, and confirm and evaluate the conclusions drawn

5. **INDUCTIVE AND DEDUCTIVE REASONING**
   - To be able to reason from the particular to the general (inductive) and from the general to the particular (deductive)

6. **USE OF MATHEMATICAL TOOLS**
   - To recognize the problems that can benefit from the use of calculus, algebra or other areas of mathematics
   - To identify which technique is best suited for a given situation
   - To apply the technique correctly

7. **PROBLEM SOLVING APPROACH**
   - To identify relevant variables
   - To break a problem into simpler components
   - To choose the sequence to follow in solving the individual components
   - To reach a conclusion

8. **USE OF DATA PROCESSING TECHNOLOGY**
   - To be at ease with the use of computers to format reports and papers
   - To gather and analyze data using spreadsheet software
   - To use mathematical software

9. **LOGICAL REASONING**
   - To be able to think through a situation using a systematic approach.
   - To understand the difference between a hypothesis and a conclusion

10. **ORAL COMMUNICATION**
    - To make an oral presentation of scientific material

11. **WRITTEN COMMUNICATION**
    - To be able to read and understand scientific material
    - To make a written presentation of scientific material

12. AUTONOMOUS WORK

- To develop independent study skills

13. TEAM WORK

- To develop the ability to cooperate with other individuals in a leadership, collaborative or supportive role
- To show respect for the other members of the team

14. SCIENCE AND SOCIETY

- To be sensitized to the implications of some scientific concepts, discoveries and theories to everyday life and environment, in a non-judgmental manner

15. PERSONAL SYSTEM OF VALUES

- To form one's own judgment on contemporary scientific issues
- To compare favorable versus unfavorable consequences of the implementation of scientific and technological developments

16. HISTORICAL CONTEXT

- To be familiar with the time frame and the state of culture at the time of a scientific discovery
- To identify the questions researchers were trying to answer when proposing new theories

17. INTELLECTUAL CURIOSITY

- To demonstrate intellectual curiosity
- To appreciate natural phenomena

18. CRITICAL THINKING

- To evaluate a theory, a result or any information on the basis of logic, knowledge, experience and common sense

19. DEVELOPMENT OF INTUITION

- To develop insight leading to an appropriate approach to new concepts and to problem-solving

20. STIMULATION OF CREATIVITY

- To develop inventiveness, inquisitiveness and originality

21. CAPACITY FOR ABSTRACT THOUGHT

- To develop the ability to conceptualize and visualize a situation or idea

22. STRENGTHS AND LIMITATIONS OF SCIENTIFIC KNOWLEDGE

- To understand the context in which a theory is valid, and recognize its limitations

23. APPLY KNOWLEDGE TO NEW SITUATIONS

- To extract knowledge from prior experience and transfer it to a new setting

24. **INTEGRATIVE ACTIVITIES**

- To establish links among two or more fields of study

MARIANOPOLIS COLLEGE

SCIENCE PROGRAM ÉPREUVE SYNTHÈSE

SELF-EVALUATION FORM ON PROGRAM GOALS

NAME (*Please print)*_____ ID #_____

ASSESSMENT ACTIVITY: _____

SUPERVISING TEACHER: _____ COURSE #:_____

DATE: _____

In the following table identify which Science Program Goals were relevant to your *Épreuve Synthèse* activity, and give a brief explanation or description in what way it met these goals. (Refer to the list of definitions of the Program Goals.)

PROGRAM GOALS	**BRIEF EXPLANATION OF HOW YOUR ACTIVITY CONTRIBUTED TO MEETING THE PROGRAM GOALS**
1 Learning and use of scientific vocabulary	
2 Acquisition and use of laboratory skills	
3 Use of graphical representation	
4 Ability to observe and analyze	

5 Inductive/deductive reasoning	
6 Use of mathematical tools	
7 Problem solving	
8 Data processing technology	
9 Logical reasoning	
10 Oral communication	
11 Written communication	
12 Autonomous work	
13 Team work	
14 Awareness of science and society	

15 Development of a personal set of values	
16 Appreciation of historical context of science	
17 Stimulation of intellectual curiosity	
18 Development and use of critical thinking abilities	
19 Development of intuition	
20 Stimulation of creativity	
21 Development of abstract thought	
22 Appreciation of the strengths/limitations of science	
23 Application of knowledge to new situations	
24 Integrative activities	

COMMENTS ABOUT THE OVERALL EXPERIENCE (Attach a separate sheet)