

## 2年 Science Math Inquiry Skills (MYP3 Unit)

### 【理数探究スキル：1単位】

#### 科目のねらい

The aims of this unit are to encourage students to:

- Develop a deeper understanding of learning skills and apply them in meaningful contexts.
- Integrate conceptual learning, ways of knowing, and methods of inquiring from math and science.
- Inquire into compelling issues, ideas and challenges by creating and designing their own experiment and writing their own science report.
- Reflect on and communicate understanding of the interdisciplinary learning process.

Experience the excitement of intellectual discovery - including insights into how disciplines complement and challenge one another.

#### 目標および評価基準

#### MYP 評価観点

A: Knowledge	Students will demonstrate a working knowledge of the scientific method by documenting the process of planning/conducting/summarizing their experiments. Students will display their mathematical knowledge through analysing their data using statistical tools and presenting the results using appropriate graphs and tables.
B: Expression	Students will use different media (words, tables, graphs, diagrams, etc.) paying attention to what media are appropriate for what context (for example, using images as well as words when describing how to fold a paper aeroplane).
C: Attitude	Students will be aware of the audience and purpose of their report, placing not only in the context of their mathematical and scientific studies, but in the wider scientific discipline of seeking truth through observation and measurement.

#### Concepts and Related Concepts

Evidence	Consequences	Logic	Validity
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#### 年間計画

時期	ユニット	1. 重要概念 2. グローバルな文脈 3. ATL	学習内容・教材等	総合的評価課題の MYP 評価観点（【】内） および課題概要と評価方法	1. 学習指導要領観点との対応
All year	1	1. Logic  2. Scientific and Technical Innovation  3. Critical Thinking Skills  Research Skills	Learning the scientific method and ways to calculate different averages.	<p>Criteria A: Knowledge Science: Students will learn about the scientific method by conducting their own experiment. Students will design their own experiment by studying the dynamics of paper airplanes and decide on their own hypothesis, decide on materials needed for their experiment and to write down and plan their own procedure. Students will gather experimental data.</p> <p>Mathematics: Students will learn about mean, median and mode and using their experimental data. Students will learn how create a box whisker plot graph.</p> <p>Criteria B: Expression Students will use a variety of media - words, tables, graphs, diagrams, etc. - to convey their</p>	We will use all the stated criteria for this unit.

		<p>Self- Management Skills</p> <p>Communication</p>		<p>ideas and evidence the research effectively.</p> <p>Criteria C: Attitude Students will think about the advantages and disadvantages of mathematic and scientific methods. They will also consider how math and science are synthesized and reflect back on their learning in math-science skills. They will learn to place their research in a wider context and reflect on how scientific development has affected human lifestyle and culture as a whole.</p>	
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