

## 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 scientific principles and their applications.
- Integrate both conceptual maths and science skills with practical applications
- Inquire into the nature of the scientific method by designing experiments and writing scientific reports.
- 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 data using statistical tools and presenting the results using appropriate graphs/tables/etc.
B: Expression	Students will use different media (words/tables/graphs/diagrams/etc.) while paying attention to what media are appropriate for what context. (For example, combining imagery with written explanations when describing how to construct a paper aeroplane).
C: Attitude	Students will be aware of the audience and purpose of their report. They will place it not only in the context of their mathematical and scientific studies, but also in the wider scientific discipline of seeking truth through observation and measurement.

#### Concepts and Related Concepts

Evidence	Consequences	Logic	Validity
----------	--------------	-------	----------

#### 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	総括的評価課題の 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.	Criteria A: Knowledge Science: Students will learn about the scientific method by designing and conducting an original experiment. They will study the aerodynamics of paper airplanes and determine a hypothesis, necessary materials and general procedure, then gather and analyse experimental data.  Mathematics: Students will learn about mean, median and mode and using their experimental data. Students will learn how create a box whisker plot graph.  Criteria B: Expression Students will use a variety of media (words/tables/graphs/diagrams/etc.) to convey their ideas and	We will use all the stated criteria for this unit.

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