

Inquiry of Science II

We conduct lessons to develop students' scientific thinking, problem-solving abilities, and communication skills. In particular, lessons of Science II are given not only in mathematics and science but by teachers of other subjects. Some of the lessons are held at the senior high school.

Special subject: "Mathematical Modeling and Analysis"

- Basic statistics concerning data description and reduction**
Students learned how to analyze data, and how to predict phenomena based on the collected data.
- Reproduction and analysis of natural phenomena**
Students learned Lotka-Volterra equations as a model to express the change of population. They used the model to express the periodicity of tuna fish population, and discussed the effectiveness of releasing tuna fish.
They also learned a cellular automaton model to simulate various situations, and discussed how to solve traffic congestion.

Students are required to write reports at the end of each term. After reading the reports, the teachers are encouraged to give their views and comments in the reports.

Research project



Physics
Chemistry
Biology
Mathematics

Research project	2015 (Grade 1)
The structure of bulk	Bulk
Development of an electrostatic lens	Electrostatic lens
Physics consideration of working conditions of a room	Working conditions of a room
The developments of methods for extraction of dyes	Extraction of dyes
Generation of ozone by electrolysis	Electrolysis
The effect of the heat of fusion of ice on the melting of ice	Melting of ice
Concentration changes of frozen zebrafish	Frozen zebrafish
Effect of alarm substance on the behavior of zebrafish	Behavior of zebrafish
Mathematical analysis of word progression	Word progression
Mathematical simulation of making fugate	Making fugate

Prizes at conferences and contests (2015)



The 5th MIMS Meeting: Award of Excellence

Main award	2015
The 59th Japan Science Awards	School award
The 59th Hiroshima Prefectural Science Awards	Special prize
As above: Hiroshima Prefectural Science Award	Award (School)
The 86th Annual Meeting of the Zoological Society of Japan	Excellence award
The 5th Meeting and analysis of excellence (students): Award of Excellence	Excellence award
The 10th Toray Prize for effective	Prize
The 17th IEF High school students' symposium	Excellence award
Hiroshima Prefectural Meeting for Excellence	Excellence award



"Energetic Universe Proposed by Gamma-ray"
Fukazawa, Yasushi (Graduate School of Science, Hiroshima University)



"Field observation of Hiroshima"



"Prototype device"



At Kobe University



"Computer"



Poster presentation conference
Hosted by Hiroshima Prefectural Hiroshima Kokutaiji High School



Hiroshima Prefectural SAIJO Agricultural High School

Frontier Science

We had the opportunity to visit the Institute for Materials and Chemical Process, Hiroshima University.

"Understanding the order to chaos"
Shoji, Jun (Graduate School of Science, Hiroshima University)

Bioinformatics

The students visited the laboratory of Professor Yoshida and learned about the latest research in the field of bioinformatics.

"Field work on rocks and fossils"
Yoshida, Kenji (Hiroshima University)

"Behavioral analysis of zebrafish"
Yoshida, Masayuki (Hiroshima University)

"The reason for the composition of the 'Triangles'"
Agaoka, Yoshio (Hiroshima University)

"Synthesis of organic materials"
Yamamoto, Yosuke (Hiroshima University)

Science Education

We visited the Graduate School of Science, Hiroshima University, and participated in the research project support meeting.

Student Exchange

We had exchange programs with Hiroshima Prefectural Kokutaiji High School, Yasuda Girls' High School, and other schools.