

Objectives and Philosophy of Science Department

Students gain scientific knowledge.

- Comprehend the subjects that constitute the basis of advanced science courses at high school or university
- Understand the subjects required for external exams (Turkish university exams, SAT subject tests, AP exams)
- Recognize that science is interesting and enjoyable

Students improve their knowledge of scientific English.

- Able to express themselves in written and oral exercises
- Read scientific texts, online problems and data in English
- Teachers guide students in terms of correct pronunciation and grammar

Students develop their experiment skills and scientific performance.

- Learn to use laboratory materials safely and consciously
- Understand the importance of scientific methods
- Gain practical skills
- Learn to use basic laboratory materials
- Draw scientific diagrams based on observations
- Create a scale drawing
- Record data objectively
- Interpret the data in tables and graphs and draw conclusions
- Collect data, present data, and use technology to analyze data
- Learn how to write a scientific report / proposal / hypothesis / evaluation using appropriate language

Students gain critical thinking and problem solving skills.

- Determine the essence of the problem by looking at the general definition of a problem, find the information to solve the problem from the given data, use reason to analyze a problem and find the solution
- Establish connections with other cases and decide when ideas developed for one problem can be applied to another problem
- Categorize substances, cases and problems according to their similarities
- Share what they believe is accurate, and then critically examines these ideas
- Constructively questions biased and unwarranted statements
- Develop self-confidence and skills to ask questions that will improve their level of comprehension
- Make recommendations for relations between subjects
- For some of the topics discussed, recommend real-life applications
- Use initiative in intellectual and applied studies

Students develop the ability to communicate successfully.

- Understand how to be an active listener and take notes
- Express their opinions clearly and respectfully in class discussions
- Cooperate constructively and productively with peers
- Write clearly and concisely using appropriate scientific language
- Organize work in a way that shows what kind of logic was used
- Use sources to extract needed information and understand the importance of citing sources as required
- Use effective Learning Management Systems

Students comprehend that responsible, ethical behavior should be a lifelong attitude.

- Evaluate scientific problems in society
- In a world that is increasingly dependent on technology, they are informed citizens who make rational contributions
- Are aware of their responsibilities to society as thinking, educated individuals