**Francis Bacon**

The seventeenth century was the time of the development of various branches of science. The new mood had been established by Francis Bacon. Bacon was a lawyer who entered Parliament early and became James I's Lord Chancellor. Bacon had a wide range of scholarly interests. He had the reputation of being the most learned man of his time. Francis Bacon's goal was synthesis He wanted to organize 'all knowledge' in a united whole. He defined the scientific method in a form that is still relevant and stimulates the growth of science. Every scientific idea, he argued, must be tested by experiment. With idea and experiment following one the other, the whole natural world would be understood. In the rest of the century British scientists put these ideas into practice.

Bacon made a great contribution to historical writing. He was a master stylist - his scientific works can be read with pleasure, as literature. He saw himself as an intellectual Columbus, revealing the new world of science to his contemporaries, and bringing back ships freighted with useful knowledge. In his "New Atlantis" Bacon described an island governed by an Academy of Sciences, founded 'for the knowledge of causes, and secret motion of things; and the enlarging the bounds of human empire, to the effecting of I all things possible'. This is the most accessible and exciting of his writings on science.

In his essay "Of Study" Francis Bacon regards studies as they should be: for pleasure, for self-improvement, for business. He I considers the evils of excess study: laziness, affectation, and preciosity, Bacon divides books into three categories: those to be read I in part, those to be read casually, and those to be read with care. I Studies should include reading, which gives depth: speaking, I which adds readiness of thought; and writing, which trains in preciseness. The author ascribes certain virtues to individual fields of study: wisdom to history, wit to poetry, subtlety to mathematics, and depth to natural philosophy. This essay has intellectual appeal indeed.

Meanwhile, scientists, were demystifying the universe. Nobody knows for sure who invented the telescope, but Galileo Galilei had built one of his own. With it he was able to confirm the heretical speculations of Copernicus, Kepler and Tycho Brahe that the sun, not the earth, was the center of our universe. The specific origins of the microscope are equally obscure. In the 17th century, Robert Hooke used it to describe accurately the anatomy of a flea and the design of a feather; Antonie de Leeuwenhoek discovered a world of wriggling organisms in a drop of water. The invention of logarithms and calculus led to more accurate clocks and optical instruments.

By 1700 Galileo, Rene Descartes, Sir Isaac Newton and other scientists had clarified the principles by which machines work. Henceforth Western civilization's technological supremacy was beyond challenge. Mechanical invention led inevitably to another step in the West's commercial and political hegemony over the world: the Industrial Revolution.

**Vocabulary**

science - наука

branches of science - области науки

establish - создать

define - давать (точное) определение

make a contribution to - внести вклад в

contemporary - современник

freight - грузить, фрахтовать

Academy of Sciences - Академия Наук

"New Atlantis" - Новая Атлантида

accessible -доступная

exciting - увлекательный

confirm - подтверждать

demystify - раскрывать

heretical - еретический

speculation - размышление

microscope - микроскоп

obscure - неясный

henceforth - с этого времени, впредь

technological supremacy - техническое превосходство

calculus - исчисление

**Questions**

1. How is the seventeenth century characterized?

2. What did Francis Bacon define?

3. How did Francis Bacon see himself?

4. What is the most exciting Bacon's writings on science?

5. What were advantages and disadvantages of study according to Bacon?

6. What categories did Bacon divide books into?

7. What should studies include according to Bacon?

8. What virtues did Bacon ascribe to different fields of study?

9. How did scientists demystify the universe?

10. What was possible to confirm and discover with the help of the telescope and microscope?

11. Why was Western civilization's technological supremacy beyond challenge?