

COMPUTERS IN THE SOCIETY

Word list:

particularly - особливо
to turn on/off – вмикати/вимикати
to adjust – регулювати; встановлювати
impossible – неможливий, нездійснений
enormous – величезний
spacecraft – космічний корабель
to assist – допомагати, сприяти
to enable – робити можливим, полегшувати

complicated – складний
tremendous – величезний
exact – точний
solution - рішення, розв'язання; пояснення
equations – рівняння
to rely (on) – покладатися (на)
random – випадковий
creativity – творчість
scholars – вчені

Exercises to the subject:

1. Read the text and say what spheres of our life we use computers nowadays.

Computers play an increasingly important role in society, particularly in industrially developed countries.

Numerous factories use computers to control machines that make products. A computer turns the machines on and off and adjusts their operations when necessary.

In most major industries, computers help researchers and executives make important decisions. Without computers, it would be impossible for engineers to perform the enormous number of calculations needed to solve many advanced technological problems. Computers help in the building of spacecraft, and they assist flight engineers in launching, controlling, and tracking the vehicles. Computers also are used to develop equipment for exploring the moon and planets. They enable architectural and civil engineers to design complicated bridges and other structures with relative ease.

Computers have been of tremendous help to researchers in the biological, physical, and social sciences. They also have a major role in the field of information science. Information science deals with how information is collected, processed, and transmitted. It brings together knowledge from many fields of study. Researchers' using computers helps them to solve problems in the biological and physical sciences.

One method used for certain problems provides exact solution in the form of mathematical equations.

In many scientific fields, researchers use computers to construct mathematical models of devices, systems and theories. The models consist of equations that describe the possible relations between the parts or processes of a subject.

Chemists and physicists rely on computers to control and check sensitive laboratory instruments and to analyze experimental data. Astronomers use computers to guide telescopes and to process photographic images of planets and other objects in space.

Computers provide an efficient means of storing and locating scientific research data for reference purposes. Their storing records of thousands of articles and reports give specialists quick access to the latest development in their field.

Computers can be used to compose music, to write poems, and to produce drawings and paintings. A work generated by a computer may resemble that of a certain artist in both style and form, or it may appear abstract or random. In either case, however, any creativity in the work is basically that of the person who programmed the computer.

Computers are also used in the study of the fine arts, particularly literature. They have also been programmed to help scholars identify paintings and sculptures from ancient civilizations.

2. Find the following words and word-combinations in English in the text: відігравати усе більш важливішу роль; промислово розвинені країни; дослідники; керівники; приймати важливі рішення; виконувати обчислення; вирішувати багато сучасних технологічних проблем; бортінженери; запуск, контроль та відслідковування літальних апаратів; дослідження місяця та планет; відносно легко; інформація збирається, обробляється та передається; вирішувати проблеми; математичні рівняння; довідкові цілі; образотворче мистецтво.

3. Match the synonyms: numerous; complicated; major; increasingly; important; particularly; tremendous; chief; more and more; sensitive; many; enormous; mainly; complex; significant; delicate.

4. Match the antonyms: impossible; abstract; efficient; necessary; random; advanced; certain; exact; unnecessary; nonrandom; possible; inexact; inefficient; uncertain; concrete; ancient.

5. Match the words with their definitions:

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| 1. researcher | a) a conveyance that transports people or objects |
| 2. executive | b) a scientist trained in physics |
| 3. spacecraft | c) a physicist who studies astronomy |
| 4. vehicle | d) investigator, research worker |
| 5. bridge | e) a person who practices or is skilled in an art, esp. painting, drawing, or sculpture |
| 6. chemist | f) a visual art created primarily for aesthetic purposes and valued for its beauty or expressiveness, specifically, painting, sculpture, drawing, watercolor, graphics, or architecture |
| 7. physicist | g) a vehicle intended to be launched into space, also called <i>spaceship</i> |
| 8. astronomer | h) a learned person (especially in the humanities); someone who by long study has gained mastery in one or more disciplines |
| 9. telescope | i) a structure that allows people or vehicles to cross an obstacle such as a river or canal or railway etc |
| 10. artist | j) a kind of tube containing lenses through which distant objects appear closer |
| 11. fine art | k) a person or group responsible for the administration of a project, activity, or business |
| 12. scholar | l) a scientist who specializes in chemistry |

6. Make up word-combinations and translate them into Ukrainian:

verbs: to make; to perform; to play; to adjust; to solve; to design; to control; to make; to develop; to describe; to analyze; to guide; to process; to give; to compose; to write.

nouns: a role; poems; machines; telescopes; bridges; equipment; images; relations; calculations; access; decisions; data; music; problems; products; operations.

7. Answer the following questions.

1. What can computers do in most major industries?
2. Computers enable engineers to design complicated structures, don't they?
3. Write out of the text words and word combinations for describing the use of computers in engineering and the sciences.