1.1.3. Science and Technology

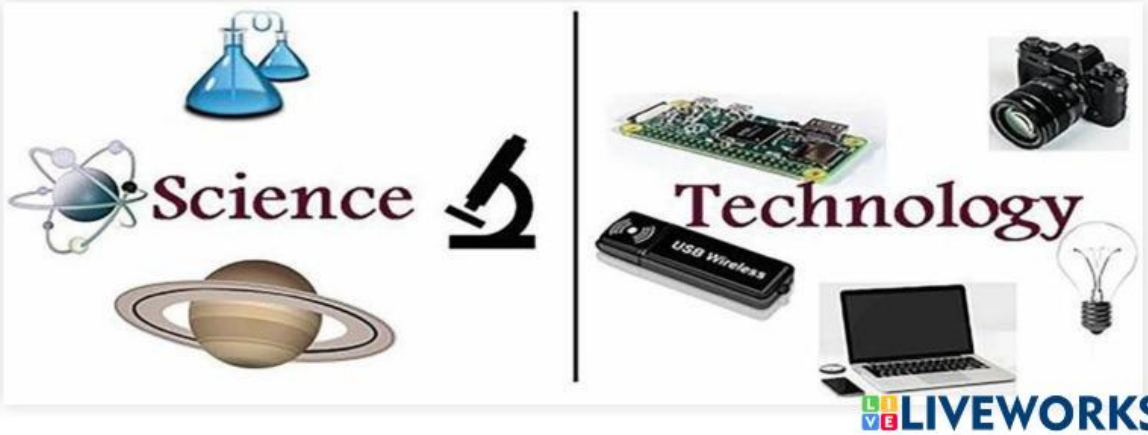
You have already discussed what science is. Now, you will see what a technology is. Technology is the use of scientific knowledge to help human beings work easier and live better as well as enjoy their environment more. It includes the use of materials, tools, techniques, and sources of power to make life easier, more pleasant and work more productive.

Things such as automobiles, TV sets, radio, bulb, microchip, computer, airplane and home tools (appliances) are the products of technology.

Key words

Science is a systematic method of gaining knowledge about the physical and natural world. Technology is the use of scientific knowledge to help human bings work easier and live better or putting scientific knowledge in to practice.

A person who studies technology is called a technologist. Technologists apply Science and mathematical knowledge and skills to produce a very useful tool.



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Science and technology is integrally connected; but they are different f ields driven by different concepts and processes. Science generates knowledge for its own sake, in order to propose and test explanations. Technology, on the other hand, develops human-made solutions to real-world problems. Of course, when science uses technology to generate knowledge, technology uses scientific knowledge to generate solutions.

Uses of Science and Technology for the Society

Science and technology plays an important role in our daily life. They mainly concerned with the production of new materials of desirable properties and qualities to satisfy social needs. They play an important role in agriculture, in production of medicines and drugs, in environment and population control, in construction industry, in manufacturing various products such as cosmetics, textiles, dyes, soaps and detergents, plastics, rubber and a variety of metals, non metals, alcoholic beverages, dry cells and car batteries, etc.

Multiple Choice Questions

1. **Technology is defined as:**

   a) A method of studying natural phenomena

   b) The use of scientific knowledge to make life easier and better

   c) A collection of facts about nature

   d) A branch of mathematics

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2. **Which of the following is NOT a product of technology?**

a) Automobiles b) Radio

c) Microchip d) Photosynthesis

3. **Which word best describes science?**

a) Knowledge application

b) Systematic method of gaining knowledge

c) Making tools and machines

d) Producing goods only

4. **Technology mainly involves:**

a) Collecting facts only

b) Applying scientific knowledge in practice

c) Studying plants only

d) Recording observations without use

5. **A person who studies technology is called:**

a) Scientist b) Engineer

c) Technologist d) Researcher

6. **What do technologists apply in their work?**

a) Only cultural knowledge

b) Science and mathematical knowledge

c) Religious beliefs

d) Myths and traditions

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7. **Which of the following is an example of technology?**

a) Microchip b) Gravity

c) Photosynthesis d) Evolution

8. **Which of the following is NOT listed as a tool or product of technology?**

a) Computer b) Airplane

c) Bulb d) Atom

9. **The relationship between science and technology is that they are:**

a) Completely separate fields

b) Integrally connected but different

c) The same in purpose and method

d) Unrelated to human life

10. **The main purpose of science is to:**

a) Develop human-made solutions

b) Generate knowledge for its own sake

c) Manufacture products

d) Entertain humans

11. **The main purpose of technology is to:**

a) Propose and test explanations

b) Develop solutions to real-world problems

c) Only study nature

d) Collect evidence

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12. **Science uses _____ to generate knowledge.**

a) Culture

b) Technology

c) Beliefs

d) Language

13. **Technology uses _____ to generate solutions.**

a) Scientific knowledge

b) Myths

c) Cultural values

d) Politics

14. **Which of the following is NOT a use of science and technology for society?**

a) Producing new materials

b) Improving agriculture

c) Creating medicines and drugs

d) Replacing human relationships

15. **Science and technology play an important role in:**

a) Agriculture and medicine

b) Environment and population control

c) Construction and manufacturing

d) All of the above

16. **Which of the following industries benefits from science and technology?**

a) Cosmetics

b) Textiles and dyes

c) Soaps and detergents

d) All of the above

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17. **Plastics, rubber, and metals are examples of:**

a) Natural sciences

b) Products of science and technology

c) Indigenous practices

d) Conventional laws

18. **Which of the following is used in energy storage and is a product of science and technology?**

a) Dry cells and car batteries

b) Airplanes

c) Computers

d) Cosmetics

19. **Which statement is TRUE about the difference between science and technology?**

a) Science creates tools, technology generates theories

b) Science generates knowledge, technology generates solutions

c) Science and technology are identical

d) Science is always more important than technology

20. **Overall, science and technology aim to:**

a) Make life easier, better, and more productive

b) Preserve myths and traditions

c) Focus only on theoretical knowledge

d) Eliminate the need for human creativity

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