

## SCHOOL ACCOLADES

Class:Std 5

Subject: Elementary Science

Weekly worksheet of 2<sup>nd</sup> week ( 2<sup>nd</sup> term)

9.6.21	Chapter-9	Read 3 times page-62-67
10.6.21	Chapter-9	Word meaning, filling in the blanks, matching sentences
13.6.21	Chapter-9	Short & descriptive questions
14.6.21	Chapter-9	Answer to the board question

### Chapter-9:

#### Word meaning:

- 1.biotechnology: a technology that uses the living systems and living things for human welfare.
- 2.industrial revolution:a rapid major change in an economy ( as in England in the late 18<sup>th</sup> century) marked by the general introduction of power -driven machinery or by an important change in the prevailing types and methods.
- 3.science:study about natural world through observation and experience to describe and explain natural phenomena.
- 4.technology: the application of science to solve the practical problems of our life.

#### Short question answer:( page:67)

1.How do scientists study the natural world?

Ans:Scientists study the natural world based on science procedure which includes observation , selection of a question whose answer is available on experiment, making a decision on experimental knowledge, exchanging decision with other.

2.What types of agricultural technology do people use to grow more food in the shortest period of time?

Ans: To grow more food in the shortest period of time, people are now using mechanical technology, chemical technology and biotechnology. Here mechanical technology includes tractor , irrigation pump, harvesting and threshing machine , chemical technology includes chemical fertilizers, insecticides , etc. and biotechnology includes genes , bacteria etc.

3.Give two examples of the negative effects of technology.

Ans:Two examples of the negative effects of technology are given below :

- 1)environmental pollution
- 2)health hazards

**4.What technology do scientists use when they study the universe?**

**Ans:**Scientists use telescope when they study the universe.

**5.How has the scientific knowledge of steam power been applied?**

**Ans:**Steam engine has been invented by using scientific knowledge of steam power.

**Descriptive Questions Answer: ( page-67)**

**1.Explain the difference between science and technology.**

**Ans:**Difference between science and technology:There is a very close relationship between science and technology. In spite of the above statement, there are a few differences between them based on fields and types of their applications.Their distinctions are explained below:

Science	Technology
1.Science is the process of acquiring knowledge through research.	1.Technology is the application of scientific knowledge or the use of scientific discoveries or inventions for developing different fields of our lives and livelihoods.
2.Science establishes relationship among different events of nature.	2.Technology fulfills different needs of human beings.
3.Science discovers and explains natural law.	3.Technology confirms the application of scientific discoveries and natural laws.
4.Science provides us with particular knowledge.	4.Technology satisfies our practical necessities.
5.Newton's discovery of gravitational law can be termed as science.	5.Making artificial satellite based on gravitational law can be termed as technology.

**2.How does agriculture technology help improve our life?**

**Ans:**We eat food for survival that is related to agriculture.Agricultural development is very closely related to agricultural technology.So, for improving our life , agricultural technology plays a very important role.World population is continually growing with the passage of time.Food need to be increased keeping consistency with population.Under this situation, to fulfill the demand for food, man takes shelter of technology namely mechanical technology, chemical technology and biotechnology.Cultivators are now using tractors, power tiller, drum seeders , threshing machine, shallow tubewells , etc. to increase the

quantity of food within a short time. Besides, chemical fertilizers and biotechnology are widely used for producing more food having the best quality by means of preventing harmful insects. All this is how agriculture technology improves our life.

**3. How does technology use scientific knowledge?**

**Ans:** There is little scope to deny that we are always dependent on technology. The things we use in our daily life are all based on technology. Again, it is also true that scientific knowledge is the base of technology. Here scientific knowledge refers to discoveries of natural laws and relationships between two natural events. In fact, scientists describe natural laws and also explain the reason of happening natural events. In order to satisfy the above statements, some practical examples are given below:

The world famous scientist Sir Isaac Newton discovered the laws of gravitation. Rockets and artificial satellites were later developed based on Newton's laws of gravitation. Here Newton's law is scientific knowledge, whereas development of technology and artificial satellites are products of technology. This is how technology uses scientific knowledge.

**4. Science and technology have different purpose, but they are close related to each other. Explain why.**

**Ans:** Science and technology are very closely related. Curiosity was the base of science and activities of the then scientists were limited to acquire knowledge. Technology develop various devices following natural laws and regulations using their intellect and some devices developed by the technologists. In favour of the above statement, the following examples are cited below:

Sir Isaac Newton discovered the laws of gravitation. Rockets and artificial satellites were later developed based on Newton's law of gravitation. The development of rockets and artificial satellites are examples of technology. Let us consider the example of electricity. The scientist who discovered electricity did not have any idea about the numerous ways in which it could be utilized. Technologists have built many types of machines such as power fan, lights, factories, radios, televisions, computers, VCRs, VCDs, etc to use electricity for different purposes. From the above discussion, it is proved that there is a close relation between science and technology.

**Answer to the question:**

**1 Write two examples of horrible applications of modern technology.**

**Ans:** Two examples of technology are given below:

1)excessive use of chemical fertilizers, pesticides and insecticides in the crop fields.

2)unplanned industrialization and construction of high-rise buildings.

2.Write two names of educational technology used in the classroom.

Ans: Two educational technologies used in the classroom:

1)books

2)pens.

3.Write the names of two chemical technologies used to increase the production of crops are:

1)fertilizers

2)pesticides.

4.Steam power is used to run ships.-Which one is scientific knowledge and which one is technology here?

Ans:Knowledge of steam power is scientific.

5.Write two harmful effects of using more chemicals fertilizers in fields.

Ans:Two harmful effects of using more chemical fertilizers in fields:

1)soil pollution

2)water pollution.

6.What is technology?

Ans:Technology can be defined as the application of scientific knowledge or the inventions for developing different spheres of lives and livelihoods.

7.What time of using a computer at a stretch is harmful to our health?

Ans:Using a computer for more than one hour at a stretch is harmful to health.

8.What is used to invent different technology?

Ans:Scientific knowledge is used to invent different technologies.

9.Write one name of mechanical technology .

Ans:Irrigation pump.

10.Biotechnology is a technology that uses different organism to ensure newer devices for human welfare.

10.What technology will you use to produce new varieties of beans?

Ans: I shall use bio-technology to produce new varieties of beans.

11.Write the names of two steps for scientific method.

Ans:The names of the two steps for scientific method are collection of information and observation.

12.Give two examples of agricultural technology.

Ans:Two examples of agricultural technology are tractor and irrigation pump.

13.In which century did industrial revolution take place?

**Ans:Industrial revolution took place in 18<sup>th</sup> century.**

**14.What kind of energy do you use when you come to the examination center on foot?**

**Ans:I use kinetic energy while coming to the examination center on foot.**

**15.Explain how our lives are being influenced by technology.**

**Ans:We reside in the age of technology.Technology is widely used for producing foodstuff we eat, for building houses, for taking medicine when we fall ill , for acquiring academic or non- academic knowledge.The things we use in playing games and sports, in making tours and journeys, etc. also belong to technology.That is, we cannot but use technology in each and every fields of lives.So , it can be said that our lives are being influenced by technology.**

**16.What is technology? Write four sentences about how technology uses the knowledge of science.**

**Ans:Technology refers to the practical application of science.**

**Science and technology run side by side .knowledge of science is used in technology in the following ways:**

**Technology is used to design products, tools and processes which improves our living standard.**

**For example, it can said that scientists have studied about electricity and build up our understanding of electricity.That scientific knowledge is applied by technologist to invent refrigerator, TV, mobile phone etc.Besides, by the use of scientific knowledge, technologists invented many devices which are used in the fields of education, agriculture, medicine, transports etc.**

**17.Give two examples of the negative effects of technology.Write three differences between science and technology.**

**Ans:Two examples of the negative effects of technology are given below :**

**1)Electricity is generated in power plants by building fuels.Bricks are also produced by burning fuels but the process causes air pollution leading to global warming.**

**2)Chemical fertilizers and pesticides are used to produce more foodgrains, but they cause soil pollution as well as water pollution.**

**Three differences between science and technology are mentioned below:**

**(Answer has been given)**

**18.What is technology? Write four sentences how agricultural technology helps improve our life.**

**Ans:** The scientific knowledge or devices which man has so far invented and is being used to adjust with environment and to solve practical problems is called technology .

During the dawn of civilization, man was fully dependent on nature for food for survival. After the invention of some agricultural technology like ploughs , spades , scythes and other simple tools for production of crops, man become independent from nature to a little extent. After the invention of tractors , harvesting machine, threshing machine, electricity, chemical fertilizer , etc, agricultural revolution took place. Finally, improved species of crops, fruits, livestock, etc. and huge quantity of foods are produced by using biotechnology that has brought about radical changes in our living standard.

**19.** Write two names of technologies and about how technology is improving our life.

**Ans:** Two technologies which are improving our life :

- 1) computer
- 2) medical devices

How technology is improving our life:

- 1) Computer technology is opening newer information and communication.
- 2) Medical technology is ensuring us with a better health and a longer lifespan.
- 3) Agriculture technology is satisfying the demand for a higher amount of food for the ever-increasing population.
- 4) Industrial technology is giving us different appliances and gadgets that ensure us with a better and easier lifestyle.

**20.** Write two examples of negative effects of technology. Write four advantages of using technology.

**Ans:** Negative effects of technology:

- 1) Burning coal in power plants causes air pollution.
- 2) Chemical fertilizers and pesticides cause soil pollution as well as water pollution.

Advantages of using technology:

- 1) Technologies like book , pen, paper and so on helps us in learning.
- 2) Technologies help us in solving practical problems.
- 3) Use of computer has made our work easier.
- 4) Invention of medicine helps us to cure diseases.

**21.** Write one use of both microscope and telescope. Write four usages of agricultural technology.

**Ans:**Microscope is used to observe micro organisms or the tiny particles of defect matters while telescope helps the astronomers to study the objects in the space.

**Four uses of agricultural technologies:**

**1)Tractor, irrigation pump , etc promotes cultivation .**

**2)Farmers use chemical fertilizers and pesticides for higher production.**

**21.Write three names of agricultural technology and how they are helping produce food write in a table.**

**Ans:**

<b>Agricultural technology</b>	<b>Uses</b>
<b>1.Mechanical Technology</b>	<b>1.Machine like tractor , irrigation pamphlet and threshing machine help to produce a higher amount of crops in the shortest period of time.</b>
<b>2.Chemical Technology</b>	<b>2.Fertilizers and pesticides helps plants to grow well and produce more crops by resisting harmful pets and weeds.</b>
<b>3.Biotechnology</b>	<b>3.Biotechnology helps the scientists to produce new plants with special quantities like more resistant to pests , more productive , etc.</b>

**22.Write the names of three situation where technologies are used.Write three sentences about how agricultural technology helps to improve our life.**

**Ans:**The names of three situations where technology are used:

**1)transportation.**

**2)healthcare.**

**3)agricultural.**

**Agricultural technology helps to improve our life in the following ways:**

**Agricultural tools and machinery help to produce a lot of food in the shortest period of time.Chemical fertilizers and pesticides are used to resist harmful pests and weeds in order to grow more food.Agricultural biotechnology allows farmers to grow plants that are more nutritious, more resistant to pests and more productive.**

**23.Write two names of technologies that are used in agricultural development.Write two differences between science and technology.**

**Ans:**Two names of technologies that are used in agricultural development are used in agricultural development are:

1)Irrigation pump: mechanical technology

2)Pesticides:chemical technology

Fill in the blanks:

1.People use \_\_\_\_\_knowledge of invent technology.( scientific)

2.A \_\_\_\_\_makes it possible for scientists to see the objects far into space.( telescope)

3.In every country \_\_\_\_\_allows farmers to grow more crops.( agricultural technology)

4.To grow more crops \_\_\_\_\_helps farmers.( technology)

5.People have developed different types of \_\_\_\_\_technology to meet the demand food.( agricultural)

6.In case of many crops, farmers use \_\_\_\_\_and pesticides to increase the production.( chemical fertilizers)

7.People have developed different types of \_\_\_\_\_technology to meet the demand of food.( agricultural)

8.Technology applies \_\_\_\_\_knowledge to create products and tools.( science)

9.Science is the knowledge or study about the \_\_\_\_\_world.( natural)

Matching sentences:

Left	Right
Industrial revolution	Turned to an addiction.
Living used for making new devices	To make new devices .
Power tillers , tractors	Of the natural world .
Chemical technology	Are not technologies .
Microscope	To invent technologies.
Scientific knowledge is required	The 18 <sup>th</sup> century .
Air , water , soil	Biotechnology .
Science is the study	Mechanical technology .
Biotechnology uses living things	Chemical fertilizers and pesticides .
Using internet can be	Seeing tiny objects .