

In the lower grades, you have learnt about science in general. It is mainly concerned with the production of new materials of desirable properties and qualities to satisfy social needs and plays an important role in agriculture, in the production of medicines and drugs, in environment and population control, in the 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.

1.1.4. The common medicinal plants used for treating various diseases are: *Hagenia Abyssinica* (Kosso tree), *Eucalyptus globulus* (bahrazaf), *Ocimum lamiifolium* Hochst (Damakese) etc.

Preserving meat by adding a salt and smoke drying.

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1.1.2. Some of the world and Ethiopian scientists and their contribution are listed below.

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Marie Curie (1867–1934), won the Nobel Prize for the discovery of the elements polonium and radium.

Isaac Newton (1643–1727) discovered the laws of motion and law of gravity.

Michael Faraday (1791–1867), discovered the generation of electricity from magnetism.

It is knowledge based on the social, physical and spiritual understandings.

Conventional science is the system of knowledge which relies on certain laws that have been established through the application of the scientific method to phenomena in the world around us.

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Indigenous Science incorporating local people's knowledge and Indigenous perspectives, while conventional scientific approaches are commonly recognized as Western science.

She works on human physiology, the impact of pesticides on human health, the use of plants as medicinal against human and animal disease and as the first female professor of Addis Ababa university.

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Tewolde Berhan Gebre Egziabher is an Ethiopian scientist, who has worked to ensure biodiversity and the rights of communities to their genetic resources.

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

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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Figure 1.3 Relationship of science and technology

Science and technology is integrally connected; but they are different fields driven by different concepts and processes.

Ethiopia is one of the countries where a wide variety of indigenous knowledge practiced for a long time to solve practical problems that exist in different areas like:–

- o Extractions of medicinal chemicals from plants to treat disease and fight infections.

Biophysics | Biology | Physics | Natural Science | Chemistry | Physical Chemistry | Biochemistry

Figure 1.2. The relationships between some fields of Natural Science

Key words

Science a systematic method of gaining knowledge about the physical and natural world.

Technology is the use of scientific knowledge to help human beings work easier and live better or putting scientific knowledge into practice.

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Exercise 1.11. Alternatively, you could choose an Ethiopian scientist and create a cartoon strip showing their discovery.

Dr. Aklilu Lemma (1935–1997) made his most important scientific discovery very early in his career, in 1964, when he discovered a natural treatment to schistosomiasis, also known as snail fever disease or bilharzia.

There are two main reasons to include Indigenous Knowledge in the science:

- Firstly, to increase awareness of original culture and identity
- Secondly, in modern day environmental problems have social and cultural dimensions which benefit from perspectives other than Western science.

Scientists and ethical discipline

Famous scientists in Ethiopia and world

A scientist is someone who systematically gathers and uses research and

evidence, to make hypothesis and test them, to gain and share understanding and knowledge. Biophysics is the study of physical phenomena and physical processes in living things, on scales spanning molecules, cells, tissues and organisms. He built the 1st dynamo. Albert Einstein (1879–1955) Developed special relativity theory Fig 1.4 some world known scientist and their works

8 General Science GRADE 7 Student Text Book Activities 1.3 Form a group and the following activity Choose one of the scientists and create a role-play for the press release following the news of his/her discovery. He found that FOR TEST berries from the endod plant, which is commonly used to make soap and shampoos in many parts of Africa, is a potent, inexpensive and safe molluscicide, to prevent the spread of the parasitic worm. Differentiate Conventional Science and Indigenous Science FOR TEST The word science comes from the Latin word 'Scientia', which means 'Knowledge'. Give short descriptions of physics, biology and geology.

4 General Science GRADE 7 Student Text Book Science has two major categories, which are natural science and social science. Biochemistry: combination of biology and Chemistry Biochemistry is the branch of science that explores the chemical processes within and related to living organisms. Things such as automobiles, TV sets, radio, bulb, microchip, computer, airplane and home tools (appliances) are the products of technology.

6 General Science GRADE 7 Student Text Book 1. 1.3. This discovery made the plant an object of scientific research in many parts of the world. Prof. Yalemtehay Mekonnen was born in Asela, Ethiopia on May 30, 1955. It includes fields such as chemistry, biology, physics and geology.