

41.1 Fields in the Life Sciences



Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction



Summarize your understanding of each paragraph.

The life sciences comprise the branches of science that involve the scientific study of organisms (including human beings) as well as many other related jobs. While biology remains the main portion of the life sciences, there are also a lot of interdisciplinary fields.

Biology and its branches. Scan through the list of biology branches shown on the “Biology List” page of this topic. Write/copy the four highlighted branches in the space provided here.

Medicine and its branches. Scan through the list of medicine branches shown on the “Medicine List” page of this topic. Write/copy the four highlighted branches in the space provided here.

New and other life science types. Scan through the list of other life sciences branches shown on the “New and Other List” page of this topic. Write/copy the four highlighted branches in the space provided here.

Read/Summarize Text



1. Read the passage.
2. Underline key expressions in each sentence.
3. Re-write each word (or expression) you underlined.
4. Summarize the passage.

History of biology.

Although the concept of biology as a single coherent field arose in the 19th century, the biological sciences emerged from traditions of medicine and natural history reaching back to ancient Egyptian medicine.

Over the 18th and 19th centuries, biological sciences such as botany and zoology became increasingly professional scientific disciplines. Cell theory provided a new perspective on the fundamental basis of life. These developments and others were included in Charles Darwin's theory of evolution by natural selection. In the early 20th century, the rediscovery of Mendel's work led to the rapid development of genetics.

https://en.wikipedia.org/wiki/History_of_biology

Re-write words you underlined

Using a complete sentence, summarize or rephrase the passage

Wikipedia List of Biology Science

Browse through this list for examples of jobs and areas of discipline that are closely associated with Biology. This is a subset of Fields in Life Science.

Selected topics from a longer Wikipedia list ...

Anatomy	Biomechanics	Ecology	Microbiology
Biochemistry	Biomedical research	Entomology	Neuroscience
Bioengineering	Biophysics	Epidemiology	Physiology
Bioinformatics	Biotechnology	Ethology	Sociobiology
Biolinguistics	Botany	Genetics	Toxicology
Biomathematics	Cell biology	Marine biology	Zoology

Summarized explanation of the four highlighted examples ...

Anatomy – study of form and function, in plants, animals, and other organisms, or specifically in humans.

Botany – also called plant science(s), plant biology or phytology, is the science of plant life and a branch of biology. A botanist, plant scientist or phytologist is a scientist who specializes in this field.

Marine biology – study of ocean ecosystems, plants, animals, and other living beings.

Neuroscience (or neurobiology) is the scientific study of the nervous system. It is a multidisciplinary branch of biology, that deals with the anatomy, biochemistry, molecular biology, and physiology of neurons and neural circuits. It also draws upon other fields, with the most obvious being pharmacology, psychology, and medicine.

Copy one of the example explanations here ...

Wikipedia List of Medical Fields

Browse through this list for examples of jobs and areas of discipline that are closely associated with Medicine. This is a subset of Fields in Life Science.

Selected topics from a longer Wikipedia list ...

Anesthesiology	Gastroenterology	Neurology	Pediatrics
Cardiology	General Practice	Nephrology	Pharmacology
Critical care	Geriatrics	Oncology	Psychiatry
Dermatology	Gynecology	Ophthalmology	Radiology
Emergency medicine	Hematology	Otolaryngology	Surgery
Endocrinology	Infectious disease	Pathology	Veterinary medicine

Summarized explanation of the four highlighted examples ...

Anesthesiology – branch of medicine that deals with life support and anesthesia during surgery.

Infectious disease – branch of medicine that deals with the diagnosis and management of infectious disease, especially for complex cases and immunocompromised patients.

Oncology – is the branch of medicine that studies of cancer.

Veterinary medicine – branch of medicine that deals with the prevention, diagnosis and treatment of disease, disorder and injury in nonhuman/animals.

Copy one of the example explanations here ...

Wikipedia List of Emerging Topics

Browse through this list for examples of jobs and areas of discipline that are growing areas of interest. This is a subset of Fields in Life Science.

Selected topics from a longer Wikipedia list ...

Biocomputers	Biomedicine	Food science	Medical device
Biodynamics	Biomonitoring	Genomics	Optometry
Bioelectronics	Biopolymer	Health sciences	Pharmacology
Biomaterials	Environmental health	Immunotherapy	Psychiatric social work
Biomedical science	Environmental science	Kinesiology	Sports science

Summarized explanation of the four highlighted examples ...

Biomaterials – any matter, surface, or construct that interacts with biological systems. This is often related to the development of new products. It encompasses elements of medicine, biology, chemistry, and materials science.

Biomonitoring – measurement of the body burden of toxic chemical compounds, elements, or their metabolites, in biological substances. Often, these measurements are done in blood and urine.

Food science – applied science devoted to the study of food. Activities of food scientists include the development of new food products, design of processes to produce and conserve these foods, choice of packaging materials, shelf-life studies, and study of the effects of food on the human body.

Sports science – studies the application of treatment and prevention of injuries related to sports medicine. The study of sport science traditionally incorporates areas of physiology, psychology, and biomechanics but also includes other topics such as nutrition and diet.

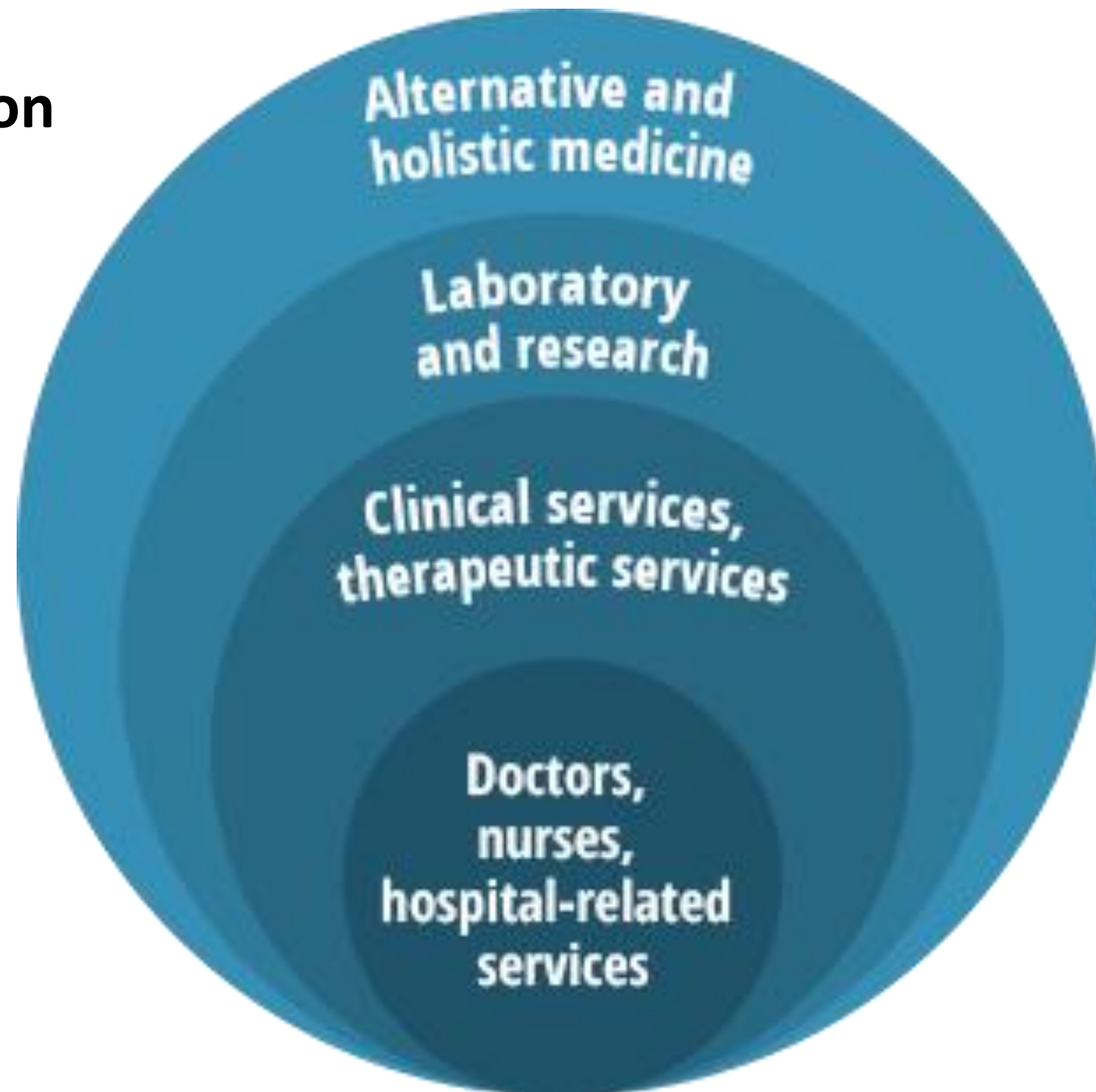
Copy one of the example explanations here ...

Draw Illustration



Copy and Label the Illustration in the Space Provided

Illustration



<https://www.publichealthonline.org/health-sciences/>

Draw (Copy) the Illustration Here

Show-Off Your Smarts!



Q1. How can this information be applied to a young-person's life?

Q2. How does this information apply to (or impact) communities?

Q3. When do scientists need to apply this information? How?

Q4. How would a person from 100 years ago view this information?

Q5. How does this topic connect to other science topics or math?

Draw a picture or illustration to summarize what you have learned ...