

U-Pick Projects: Branches of Science

Name _____

Directions: Pick projects that will earn you a minimum of 12 points. Shade in the boxes to show the projects you complete. You may create electronic versions that can be shared with your teacher or complete them with materials you have available at home. You may choose up to 2 more to earn extra credit equal to the number of points the boxes are worth.

Pts	Science Connections	Ologies	Vocabulary
1	Find examples of science in your home or yard to create a display to teach others about science in our daily lives.	Make a display that shows how the different “ologies” are classified into the 3 main branches of science: life science, physical science, and earth science.	Create a set of flashcards for 10 vocabulary terms from the “Ologies” set. Each flashcard should have the term listed on the front along with a picture clue and a definition on the back.
2	Create a cartoon for younger students to explain one science concept in terms they would understand. The cartoon may be on paper or in the form of an animation or video.	Pick one of the “ologies” and develop a job posting that includes the education required, daily activities, and types of tools or equipment the scientist would need to use to perform his/her job.	Make a “word web” or display using 10 vocab words from the “Ologies” set that shows how the terms are connected. You need to include a brief definition for each and draw arrows to show the connections
3	Find three newspaper or online articles about recent scientific discoveries. Identify the types of scientists involved in the discovery.	Create a song about the different branches of science. Your song will need to include at least 10 of the “ologies” along with information to explain what is studied.	Create a crossword puzzle using at least 15 terms from the “Ologies” set. You must provide the clues and an answer key.
4	Identify a scientific claim made by advertisers that could be tested using materials you have available. Write a report that tells how you conducted the experiment, shows your data, and includes your conclusion.	Use the resources you have available to write a newspaper article about a famous scientist. Provide background information about the scientists and his/her important discoveries. (Minimum of 200 words)	Create 10 questions using the “Ologies” set that your teacher could use for online games or tests. Each question must have 4 answer choices with the correct answer identified.

Total Points Earned = _____

“Ologies” Vocabulary – Also available at [Quizlet](#)

Acarology - Study of ticks, mites and spiders

Anatomy - Structure and function of living things, such as cells, tissues, organs, and organ systems

Astronomy - The study of the moon, stars, and other objects in space

Bacteriology - The study of bacteria, especially in relation to medicine and agriculture.

Biochemistry - Study of the chemistry in living things which includes metabolism

Biology - The study of living things and everything about it

Botany - Study of plants and everything about them

Chemistry - Study of the properties of matter and how matter changes into new substances

Climatologist - A person who studies the different climates.

Cytology - Study of cell biology including cell anatomy and physiology

Ecology - Study of organisms and how they interact with the environment, such as habitats and food web

Embryology - Study of development of living things before birth

Endocrinology - Study of hormones and their composition and function

Entomology - Study of insects

Environmental Science - Study of how humans impact the earth and its resources.

Epidemiology - Study of the incidence, distribution, and possible control of epidemics and other diseases

Genetics - Study of heredity & inherited traits passed down from generation to generation

Glaciology - Study of the nature, formation, and movement of glaciers

Helminthology - Study of worms, particularly parasite forms such as tapeworms

Hematology - Study of the blood and blood diseases

Herpetology - Study of reptiles and amphibians

Hydrology - Study of water on earth

Ichthyology - Study of fish

Immunology - Study of the immune system and its responses to invading pathogens

Invertebrate zoology - Study of animals without a backbone

Limnology - The study of freshwater systems, such as lakes, ponds, and rivers

Mammology - Study of mammals

Marine Biology - Study of life in the ocean

Marine Geology - Study of the geologic features of the ocean floor, including plate tectonics of the ocean

Meteorology - Science dealing with the atmosphere and weather

Microbiology - Study of microscopic life forms

Mineralogy - Study of naturally occurring chemical compounds and their properties; examples include quartz, fluorite, and calcite

Mycology - Study of fungi and yeasts

Neurology - Study of nerves; also a branch of medicine dealing with diseases of the nervous system

Osteology - Study of the bones and the disorders and diseases of the skeletal system

Paleontology - Study of fossilized plants and animals remains to gain clues about Earth's past

Parasitology - Study of parasites

Pathology - Study of all aspects of diseases & possible causes of death

Physics - Study of matter and energy and the interactions between the two through forces and motion.

Physiology - Study of the functions of the structures of the body (often combined with Anatomy concepts)

Seismology - Study of earthquakes and seismic waves

Selenology - Study of Earth's moon and its geology

Vertebrae zoology - Study of animals with backbones and everything about them.

Virology - Study of viruses and viral diseases

Volcanology - Study of volcanoes and volcano-related phenomena

Zoology - The study of all types of animals and everything about them

Note: You may use other “ologies” not included in this list.