U-Pick Projects: Branches of Science

**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.

<table>
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<th>Pts</th>
<th>Science Connections</th>
<th>Ologies</th>
<th>Vocabulary</th>
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<tr>
<td>1</td>
<td>Find examples of science in your home or yard to create a display to teach others about science in our daily lives.</td>
<td>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.</td>
<td>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.</td>
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<td>2</td>
<td>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.</td>
<td>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.</td>
<td>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.</td>
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<td>3</td>
<td>Find three newspaper or online articles about recent scientific discoveries. Identify the types of scientists involved in the discovery.</td>
<td>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.</td>
<td>Create a crossword puzzle using at least 15 terms from the “Ologies” set. You must provide the clues and an answer key.</td>
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<td>4</td>
<td>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.</td>
<td>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)</td>
<td>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.</td>
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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
Mammalogy - 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
Phylogenetic - Science of life and evolution
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)
Sedimentology - Study of earth processes and the way sediments are formed
Seismology - Study of earthquakes and seismic waves
Selenology - Study of Earth’s moon and its geology
Vertebrate 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.