



Educational Topic

Microbiologist

Related Job Titles:

Biologist, Life Scientist, Medical Scientist, Molecular Biologist, Biochemist, Physiologist, Ecologist

Job Description:

Microbiologists study living things that are too small to be seen without a microscope, such as bacteria, algae or fungi. They are interested in the effects micro-organisms have on plants, animals and humans (for example, how micro-organisms assist in the breakdown and decomposition of living things). Microbiologists are also interested in the uses micro-organisms may have in the environment and people's daily lives, such as cures for human diseases. Microbiologists often work in traditional environments such as laboratories, offices, work stations or universities where they conduct research and a variety of experiments, write and publish papers, or teach.

Interests / Abilities:

- Do you like to examine things under a microscope?
- Are you good at observing and then reporting what you see?
- Can you clearly communicate your ideas to others?
- Do you like to help other people?
- Are you interested in what causes diseases and how they are spread?

Suggested School Subjects / Courses:

- Biology
- Chemistry
- Mathematics (algebra, trigonometry and calculus)
- Laboratory research and fieldwork
- Writing and speech

Education / Training Needed:

The minimum education required for this position is a bachelor's degree in Biology, Microbiology, or related field from an accredited college or university. This level generally does not involve research and generally involves assisting others in testing and observation. A master's degree is required for applied research and managerial positions. A Ph.D. degree is usually necessary for independent research.

Areas of expertise:

- *Bacteria*: study of bacteria and their relations to medicine, industry and agriculture
- *Mycology*: a branch of biology dealing with fungi
- *Viral*: a branch of science that deals with viruses
- *Food/Industrial*: micro-organisms to be used in yogurt, cheese, etc.
- *Environmental*: identify micro-organisms that may pollute food, water and the environment
- *Medical*: identify micro-organisms that can be used in medicines or help identify or treat disease

