



BIOSCIENCE APPLICATIONS

Bioscience Applications youth apprentices perform biological laboratory procedures, including preanalytical, analytical and post-analytical work using common laboratory equipment. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One year. This pathway has a prerequisite of completion of the Bioscience Foundations program.

COMPETENCIES

Youth apprentices must complete a **total of 10** competencies listed below. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Competencies
1. Organize and analyze data
2. Present scientific data
3. Grow and/or care for plants and/or lab animals
4. Collect plant or animal tissues from source
5. Isolate and/or purify cells, microbes, nucleic acids and/or proteins
6. Quantify and/or identify cells, microbes, nucleic acids and/or proteins
7. Culture cells and/or microbes
8. Harvest cells and/or microbes
9. Perform spectroscopy
10. Perform chromatography
11. Perform microscopy
12. Perform restriction digests
13. Perform gel electrophoresis
14. Perform amplification
15. Perform blot assays
16. Prepare samples for nucleic acid sequencing
17. Perform cellular assays
18. Perform immunoassays (ELISA)
19. Perform protein quantification assays
20. Perform transfection
21. Perform basic cloning (transformation)
22. Run expression cloning tests

REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

The following Registered Apprenticeship is available in this area:

- Biotechnology Lab Support Assistant

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. The following is a partial list.

- Biotechnology Laboratory Technician
- Medical Laboratory Technician