

Appendix 1

Charlotte Mecklenburg Schools Essential Standards for Honors Forensic Science Toxicology

- HS-FS-T-1a Students will understand that drugs, toxins and poisons may not be apparent at a crime scene and will learn the types of indicators present.
- HS-FS-T-2a Students will be able to describe the difference between drugs, toxins and poisons.
- HS-FS-T-2b Students will be able to describe and perform the proper steps of collection and preservation of drug evidence in the field.

Students will learn to differentiate between drugs, poisons and toxins and learn how to recognize and collect evidence of them at crime scenes.

- HS-FS-T-3a Students will understand the process of isolating and identifying drugs, toxins and poisons in human tissue.
- HS-FS-T-3b Students will understand and appreciate the difficulties in isolating drugs, toxins and poisons in human tissue.

Students will learn how tissue samples are collected and what types of tests are available in the toxicology lab to identify them.

- HS-FS-T-3c Students will be able to compare and contrast chromatography, UV/VIS/IR spectrophotometry and mass spectrophotometry.

Students will learn about and perform different types of chromatography to separate mixtures. Students will learn about the properties of light and how it is used in spectrometers to identify and quantify drug and poison samples. Students will work with a UV-Vis spectrometer and with mass spectrometer data.