

PRE-WORK for CHEMISTRY MERIT BADGE

Due May 31, 2025

SAFETY REQUIREMENTS for PARTICIPATION in the COURSE.

1. Closed toed shoes must be worn. No crocs or sandals!!
2. You must wear long pants for protection of your legs.
3. No contact lenses. Wear your glasses.
4. Food and beverages are not permitted in the laboratory. If you bring them, they will have to be left outside.
5. If you have long hair, it must be tied back. We will be working with open flames.

Requirements for the Chemistry Merit Badge were updated at the beginning of 2025 and should be accessed at this link:

<https://www.scouting.org/merit-badges/chemistry/>

If you want to use a worksheet, make sure that it corresponds to the updated requirements. Otherwise, you may use notebook paper or provide a typed print-out.

*NOTE: You will need the information for the requirements listed below to participate in the discussions. Participation in the discussions is **required**.*

Complete Requirement 1a.

Safety data sheets (SDS) can be accessed at this link:

<https://chemicalsafety.com/sds-search/>

You will need to do a search on waterproofing spray to find an option.

Complete Requirement 1b.

Representative personal protective equipment (PPE) can be accessed at this link:

<https://www.hseblog.com/ppe-for-chemical-handling/>

Complete Requirement 1c.

Definition of pictograms can be found at this link:

<https://ehs.princeton.edu/news/know-your-hazard-symbols-pictograms>

For Requirement 1d:

Make a list of the chemicals in use or in storage where you live. Good places to start looking include kitchen cabinets, bathroom cabinets, closets, laundry areas, and any type of storage area (locker, shed, work bench, basement, garage). You will need this list for the discussion.

Complete Requirement 6.

There are many fields of chemistry that can be used to complete this requirement. You may use five fields from this list or ones that you find on your own.

Analytical Chemistry	Organic Chemistry	Physical Chemistry
Forensic Chemistry	Inorganic Chemistry	Biochemistry
Clinical Chemistry	Nuclear Chemistry	Astrochemistry
Geochemistry	Food Chemistry	Pharmaceutical Chemistry
Polymer Chemistry	Materials Science	Chemical Safety
Chemical Engineering	Chemical Handling	Immunochemistry
Plant Chemistry	Agricultural Chemistry	Petrochemistry

You will find this website useful:

<https://www.indeed.com/career-advice/career-development/types-of-chemistry>

Complete Requirement 7.

You can find a list of government agencies that oversee or regulate chemical usage at this site:

<https://abrahamwatkins.com/blog/2024/02/the-role-of-federal-regulatory-agencies-in-chemical-safety/>

Use this as a starting point for completing this requirement.

Complete Requirement 8.

You will find the link listed under Complete Requirement 6 helpful in completing this requirement.