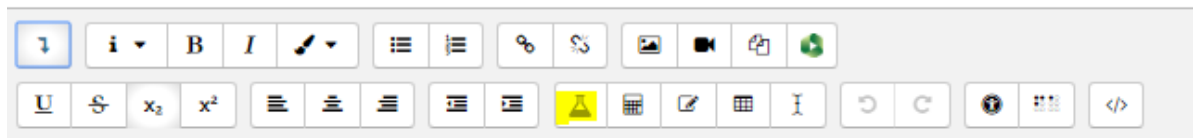


# Tools for special use

## Chemistry in editor

In MyCourses text editor, you can use chemistry formulaes, symbols and units.



## Astra

The Moodle Astra plugin ([https://github.com/apluslms/moodle-mod\\_astra](https://github.com/apluslms/moodle-mod_astra)) replicates the basic functionality of the A+ learning management system (<https://apuluslms.github.io/>). With Astra, you can develop automatically graded exercises and online text books with interactive contents. You should first understand how to create courses in A+ since Astra works in the same way. The quick start guide (<https://apuluslms.github.io/guides/quick/>) describes how to set up the A+ course development environment and the A+ manual (<https://plus.cs.aalto.fi/aplus-manual/master/>) covers the development in more detail. The A+ manual also has a module about the Astra plugin ([https://plus.cs.aalto.fi/aplus-manual/master/moodle\\_astra/](https://plus.cs.aalto.fi/aplus-manual/master/moodle_astra/) and [https://github.com/apuluslms/course-templates/blob/master/moodle\\_astra/introduction.rst](https://github.com/apuluslms/course-templates/blob/master/moodle_astra/introduction.rst)).

Note that A+ and Astra expect course developers to have many more technical skills than typical Moodle activities. Course development requires the use of the Git version control system and Docker containers. The implementation of automatically graded exercises typically requires programming skills. Technologies used in the implementation of the exercise and its grader can be chosen freely as long as the grader can be executed in a Linux container.

Furthermore, note that Astra requires an exercise service outside Moodle/MyCourses. Typically, the exercises are implemented on the A+ MOOC-Grader platform. The Department of Computer Science hosts servers for exercise services, but they are typically only offered to the courses organized by the department. Courses outside the CS department should set up their own servers. The CS department also offers support for teachers using A+ or Astra via the email [apluguru@cs.aalto.fi](mailto:apluguru@cs.aalto.fi), but again it is primarily targeted only at the CS department.

Astra has been developed in the Department of Computer Science at Aalto University.

## Coderunner