

Virginia

Standards of Learning Assessments

Test Blueprint

End-of-Course Chemistry

2018 Science

Standards of Learning

This test blueprint will be effective with the administration of the spring 2026 Science *Standards of Learning* (SOL) tests.

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End-of-Course Chemistry *Standards of Learning*

Test Blueprint

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General Test Information

Test Blueprint

Much like the blueprint for a building, a test blueprint serves as a guide for test construction. The blueprint indicates the content areas that will be addressed by the test and the number of items that will be included by content area and for the test as a whole. There is a blueprint for each test (e.g., Grade 3 Reading, Grade 7 Mathematics, Civics and Economics, End-of-Course Chemistry).

The Chemistry SOL test blueprint contains information for the online and traditional/paper format test. All students who take a particular version (online, paper, large print, or braille) of the test respond to the same test questions.

Reporting Categories

Each test covers a number of Standards of Learning (SOL). In the test blueprint, the SOL are grouped into categories that address related content and skills. These categories are labeled as reporting categories. For example, Chemistry SOL CH.2c is assigned to the reporting category *Atomic Structure and Periodic Relationships*. Each SOL in this reporting category addresses a skill involved in investigating or understanding that elements have properties based on their atomic structure. When the results of the SOL tests are reported, the scores will be presented for each reporting category and as a total test score.

Assignment of SOL to Reporting Category

In the Chemistry SOL test (2018), each content standard is assigned to only one reporting category. For example, Chemistry SOL CH.6a is assigned to *Phases of Matter and Kinetic Molecular Theory*.

Coverage of SOL

Due to the large number of SOL in each grade level content area, *every* standard will not be assessed on every version (form) of an SOL test. By necessity, to keep the length of a test reasonable, each version will sample from the SOL within a reporting category. All SOL in the blueprint will be tested within a three-year period, and *all* SOL in the blueprint are eligible for inclusion on each version of an SOL test.

Use of [2018 Science Standards of Learning](#) Resource Documents

The Standards of Learning, amplified by the Curriculum Framework (transitioning to Instructional Guides in 2026), define the essential understandings, knowledge, and practices measured by the Chemistry SOL tests (2018). These documents identify the content and practices students need to master.

Use of Calculators

Chemistry SOL test (2018) items will have the online Desmos Virginia Graphing calculator included on the toolbar for every item in the online test.

Assessment Resources

[SOL Practice Items \(All Subjects\)](#)


Practice Item sets are available for each course having an associated SOL test. These item sets provide online practice with content that measures the SOL. Practice items for Chemistry (2018) will be available in late fall 2025. Downloadable, printable PDF versions of the multiple-choice Practice Items for Science (2018) will also be available on this same page of the VDOE website.

Teachers or other adults are encouraged to read the introduction documents on the SOL Practice Items (All Subjects) page:

- The Introduction to TestNav 8: Multiple-Choice/Technology-Enhanced Item Tests – This document is an introduction to the online navigation, online tools, accessibility features, and overall functionality and appearance of SOL test questions in TestNav 8. This document also provides an overview of the various types of technology-enhanced item students may receive in the online test. It is highly recommended for teachers or other adults read this document before using the Guided Practice Suggestions for a practice item set.
- Guided Practice Suggestions – The Guided Practice Suggestions are designed to be used alongside the practice items for that content area. The document provides specific suggestions for teachers as they lead students through a practice item set. Information about correct answers and item functionality is included within the guide. When the SOL Practice Items are updated for the 2018 Science SOL in fall 2025, the Guided Practice Suggestions will be updated to reflect those changes.

**EOC Chemistry
2018 Science SOL
Test Blueprint Summary Table**

Reporting Category	<u>Chemistry</u> <u>Standards of Learning</u>	Number of Items
Atomic Structure and Periodic Relationships	CH.2a-e	9
Chemical Formulas and Reactions	CH.3a-f	11
Molar Relationships	CH. 4a-b CH.5a-e	13
Phases of Matter and Kinetic Molecular Theory	CH.6 a-c CH.7 a-g	12
Number of Operational Items*		45
Number of Field-Test Items**		10
Total Number of Items on Test		55

 The Scientific and Engineering Practices are embedded into test items to varying degrees.

*Online test forms include multiple-choice and technology-enhanced items (TEI). Up to 15% of the items on an online form will be TEI.

**Field-test items will be administered to students for potential use on subsequent tests and will not be used to compute students' scores on the test.