



VIRGINIA DEPARTMENT OF EDUCATION

# New State Guidelines for Advanced Physics

April 2, 2022  
9:00 – 9:15

Presented by:

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# Thank You!

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# Standards

# Guidelines

# The Task: Creating Guidelines

- Aligned to SCED Code 3152

“Usually taken after a comprehensive initial study of physics, Physics—Advanced Studies courses provide instruction in laws of conservation, thermodynamics, and kinetics; wave and particle phenomena; electromagnetic fields; and fluid dynamics.”

# The Task: Creating Guidelines

- Aligned to SCED Code 3152
- Reflects research on depth versus breadth of physics content (UVA's Robert Tai and many others)

# The Task: Creating Guidelines

- Aligned to SCED Code 3152
- Reflects research on depth versus breadth of physics content
- Designed to increase student appreciation of physics content

**Physics  
Is  
Phun!**

# Advanced Physics

## Content Guidelines

- Ready to be reviewed now

Where can I get a copy?

[gregory.macdougall@doe.Virginia.gov](mailto:gregory.macdougall@doe.Virginia.gov)

## Curriculum Framework

- Ready June 30

Where can I get a copy?



# SCIENCE

## News & Announcements

### Reminders and Updates Regarding the Implementation of the 2018 Science Standards of Learning (Supt's Memo 254-21) (PDF)

#### Schedule for Implementation

##### 2021-2022 School Year- Crosswalk Year

- 2010 *Science Standards of Learning* and 2018 *Science Standards of Learning* are included in written and taught curriculum.
- Spring 2022 Standards of Learning assessments (state and federal mandated assessments for grades 5, 8, and EOC Biology) will measure the 2010 *Science Standards of Learning* and include field test items measuring the 2018 *Science Standards of Learning*.
- Spring 2022 Standards of Learning assessments for Chemistry and Earth Science will not include field test items measuring the 2018 *Science Standards of Learning*.
- Required third grade performance assessments may reflect either the 2010 *Standards of Learning* or the 2018 *Standards of Learning*. The [VDOE Grade 3-5 Common Rubric](#) to be used to score assessments reflects the Scientific and Engineering Practices in the 2018 *Science Standards of Learning*.

##### 2022-2023 School Year- Full Implementation Year

- Written and taught curricula reflect the 2018 *Science Standards of Learning*
- Spring 2023 Standards of Learning assessments for grades 5, 8 and EOC Biology will measure the 2018 *Science Standards of Learning*.
- Spring 2023 Standards Learning assessments for Earth Science and Chemistry will measure the 2010 *Science Standards of Learning*. Students needing these assessments for verified credit should be provided instructional support that addresses any gaps between the 2010 and 2018 *Science Standards of Learning*.
- Required third grade performance assessments must reflect the 2018 *Science Standards of Learning*.
- All Science SOL tests measuring the 2010 and 2018 *Science Standards of Learning* will include access to the [Desmos](#) Virginia Online Calculator beginning in spring 2023.

### 2018 SOL Test Blueprints

In preparation for implementation of the new assessments measuring the 2018 *Science Standards of Learning*, new science test blueprints have been developed for the grade 5 science, grade 8 science, and EOC Biology SOL tests. The new science test blueprints are available online at the [VDOE Science Standards of Learning Assessment](#) page. It is important to note that science assessments developed using the new blueprints will be administered for the first time in the spring 2023 SOL test administration.

### Science Instructional Plans (SIPs)

The Science Instructional Plans are uploaded daily into [#GoOpenVA](#) and can easily be accessed through the Science VDOE group. Find lesson plans for each grade level and discipline that were created to engage students as they build science conceptual understanding using the 2018 *Science Standards of Learning*.

### Science Update

Interested in receiving updates from the VDOE Science Instructional Team? Please [register](#) to be included in these bi-weekly updates.

### Page Contents

- [Science Standards of Learning - Adopted 2018](#)
- [Science Standards of Learning - Adopted 2010](#)
- [Resources for Instruction](#)
- [Resources for Assessment](#)
- [Previous Version SOL](#)

STANDARDS OF LEARNING (SOL) & TESTING

- Computer Science
- Data Science
- Digital Learning Integration
- Driver Education
- Economics & Personal Finance
- English
- Family Life
- Fine Arts
- Health
- History & Social Science
- Mathematics
- Physical Education
- Science
- World Language

Resources:

- Parent & Caregiver Resources for Growth Assessments
- TeacherDirect
- Practice Items
- Released Tests & Item Sets
- SOL Approval Schedule (Word)
- SOL & Common Core Standards
- Integrating SOL & Technology (PDF)

CONTACT US

The pages for Standards of Learning & Testing are managed by several divisions and offices. See [Staff Contacts](#).



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## SCIENCE

### News & Announcement

Reminders of Updates I  
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- Spring 2022 Standards of Learning
- Required third grade performance

2022-2023 School Year- Full Implementation

- Written and taught curricula
- Spring 2023 Standards of Learning
- Spring 2023 Standards Learning

Standards of Learning (SOL & Testing)

### Resources for Instruction

- Using Statewide SOL Test Results to Guide Instruction - Examples of challenges
- ESS Sample Lesson Plans - align instruction with the 2010 Science SOL by providing
- Science Standards of Learning Crosswalk between 2018 and 2010 Standard
- Science and Engineering Progression: Kindergarten through 5th grade (Word)
- K-3 Science Progression (PDF) - Shows the progression of standards from kindergarten
- Science Instructional Resources

### Science Content Guidelines

Content guidelines are in the process of being constructed for all Biology II and divisions may adapt these to meet the need of the students in their schools. Content

- Biology II: Anatomy & Physiology (Word)
- Environmental Science (Word)
- Earth Science II: Astronomy (Word)
- Earth Science II: Geology (Word)
- Earth Science II: Oceanography (Word)
- Biology II: Ecology (Word)
- Biology II: Genetics (Word)
- Biology II: Advanced Survey of Biology Topics (Word)
- Chemistry II (Word)

Physics II will be in this list.

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## STANDARDS OF LEARNING (SOL) & TESTING

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Resources:

Parent & Caregiver Resources for Growth Assessments

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