Navigating the Science Assessment Landscape 2011-2012

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Green comments provided by OESD staff. Rest of document from Office of Superintendent of Public Instruction website, http://www.k12.wa.us

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The Basics- Where to Start

<table>
<thead>
<tr>
<th>Elementary MSP</th>
<th>Middle School MSP</th>
<th>High School Biology EOC</th>
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</table>
| **Science Assessment Update for 2012**<br>
These documents include: updates to the science assessment system for 2012; sample items to familiarize teachers and students with the item types on the assessments; and scoring information for educators. |
| **Science Assessment Update for 2012**<br>Grade 5 |
| **Science Assessment Update for 2012**<br>Grade 8 |
| **Science Assessment Update for 2012**<br>Biology EOC |

**K-12 Science Standards** (Revised June 2009)<br>(132 pages, 1.66 MB)<br>**K-12 Science Standards** (Revised June 2009)

Teaching and Learning Science & Assessment Informational Webinars
Addressing the anticipated end-of-course exam in biology, science standards, best practices in instruction, Next Generation Science Standards, and STEM education.

**Recordings of Past Webinars**

**January 9, 2012**
[Preparing for the Biology End of Course Exam](#) (WMV, 60 MB)

**November 21, 2011:**

**October 24, 2011:**
[Assessment and Teaching and Learning Science Webinar](#) (PPT)

**September 14, 2011:**
[Life Science Instructional Supports and Biology EOC Webinar](#) (PPT)<br>[Biology End-of-Course Update and Instructional Course Supports](#) (WMV, 39 MB)
**Future webinar dates/times**
*Information will be posted at [http://www.k12.wa.us/Science/Standards.aspx](http://www.k12.wa.us/Science/Standards.aspx)*

<table>
<thead>
<tr>
<th>Date</th>
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<tr>
<td>February 27, 2012</td>
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<tr>
<td>March 19, 2012</td>
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<tr>
<td>April 30, 2012</td>
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Past Tests and Analysis

Lessons Learned from Scoring Student Work
The Science Assessment Team shares observations about student responses for the Measurements of Student Progress and the Biology End-of-Course exam pilot items.

Teacher Resource Tool Diagnostics
A diagnostic look at past assessments...shows you what was measured and student achievement by item.

Past Tests
A note on using released items and samples from previous test formats, including PCAs: These are still useful as examples, but were written for the 2005 standards and WASL. Hopefully, more current release items and PCAs will be available in the future. For the information on current tests, refer to the Test and Item Specifications and Teacher Resource Diagnostic Tool.

Released Scenarios and Items- Samples From Previous Tests
These released items match the previous Science Standards (2005 Grade Level Expectations).

Due to transitioning the assessments to measuring new standards, there will be no released items from the 2011 MSP or HSPE. Please visit our Educator Resources page for links to sample items matching the K-12 Science Learning Standards (adopted 2009).

OSPI has released test questions from previous tests (formerly the WASL). These documents contain released items from 2006 to 2009, which match the previous science standards (2005 Grade Level Expectations).


Grade 10: 2008 Student, 2008 Teacher, 2007 Teacher, 2006 Teacher
Powerful Classroom Assessments (PCAs)

Powerful Classroom Assessments (PCAs) are produced by OSPI Science Assessment primarily for use in teacher workshops. Teachers can also use them in the classroom to help students understand how questions are scored on the state test.

The PCAs currently available match the previous Science Standards (2005 Grade Level Expectations).

PCAs are good assessment targets from which diagnostic, formative, and summative tools can be developed. PCAs are most powerful when teachers use the Templates to make classroom assessments based on the units they are currently teaching.

The following documents are part of a PCA:

- Scenario and Items: "Test" booklet containing a scenario and 10 test questions
- Scoring Guide: Contains the answer key and Rubrics for the written-response questions
- Student Response: Actual student answers to the written-response (10 examples)
- Annotations: Explanation of how the Rubric was applied to the student answers and the score each Student Response earned

PCAs:

- Published by OSPI
- Grade 5
- Grade 8
- High School
Information for Writing Your Own MSP- or EOC-like Scenarios

Test and Item Specifications
The newly released test and item specifications provide a needed tool for test developers but also provide important information for classroom teachers. Classroom teachers should find this section quite useful when creating scenarios and items for use in classroom-based assessments.

<table>
<thead>
<tr>
<th>Grade 5 Test and Item Specifications (PDF, 45 pages) (Word) - Revised July 22, 2011</th>
<th>Grade 8 Test and Item Specifications (PDF, 50 pages) (Word) - Revised October 20, 2011</th>
<th>Biology Test and Item Specifications (PDF, 40 pages) (Word) - Updated with test map October 11, 2011</th>
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<tr>
<td><strong>Modifications to Grade 5 Test and Item Specifications:</strong></td>
<td><strong>Modifications to Grade 5 and 8 Test and Item Specifications:</strong></td>
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<td><strong>Comment</strong></td>
<td><strong>Item Spec</strong></td>
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<td>6-8 INQB(1)</td>
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<td>added item type SA</td>
<td>6-8 INQB(3)</td>
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<tr>
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<td>6-8 APPB(1)</td>
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<tr>
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<td>6-8 PS3F(4)</td>
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<td>Added: compost, decay, identical, mineral nutrient</td>
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<tr>
<td>6-8 LS2C(1)</td>
<td>note added</td>
<td>6-8 VOCAB</td>
</tr>
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Science Short-Answer Item Templates
These Word documents contain templates for the question and the scoring rubric of common short-answer items on the Science MSP and Biology End-of-Course. The templates can be edited for use in classroom practice by incorporating content from any unit in a science curriculum.
Inquiry Items

Conclusion: Grade 5 Grade 8 EOC
New Procedure: Grade 5 Grade 8 EOC
New Field Study: Grade 5 Grade 8 EOC

Application Items

Research & Explore: N/A Grade 8 EOC
Plan & Test: Grade 5 Grade 8 N/A
Redesign: Grade 5 Grade 8 EOC
Criteria & Constraints: N/A N/A EOC
Test Solution: N/A N/A EOC
Careers: Grade 5 N/A N/A

Powerful Classroom Assessments (PCAs)

The PCAs currently available match the previous Science Standards (2005 Grade Level Expectations).

PCAs are good assessment targets from which diagnostic, formative, and summative tools can be developed. PCAs are most powerful when teachers use the Templates to make classroom assessments based on the units they are currently teaching.

PCA Templates: Make your own PCA from a template

Training: Check the Science Assessment Leadership Team (SALT) site or contact your local SALT member.

2012 Winter Courses available from OESD (also, can be brought to your school):
Teaching and Assessing Science EALR 1: Systems for 3rd - 8th Grade and HS Science Teachers

Systems thinking makes it possible to analyze and understand complex phenomena. Systems concepts begin with the idea of the part-to-whole relationship in the earliest grades, leading to the mastery of analyzing systems by high school. Participants will:
- Examine their understanding of systems and the crosscutting content of EALR 1 in the 2009 Science Standards.
- Explore resources and how to teach systems using current instructional materials.
- Learn how systems will be assessed on the 5th and 8th grade Measurement of Student Progress (MSP) and/or the Biology EOC and write system scenarios matched to the content you teach.

Two Opportunities for Teaching and Assessing Science EALR 1: Systems

<table>
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<tr>
<th>Event</th>
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<th>Time</th>
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<tr>
<td>Full Day Workshop</td>
<td>Tuesday, February 14th</td>
<td>8:30 am – 3:30 pm</td>
</tr>
<tr>
<td>Systems &amp; Slices</td>
<td>Monday, March 5th &amp; Monday, March 12th</td>
<td>4:00 pm – 7:00 pm</td>
</tr>
</tbody>
</table>
End-of-Course (EOC) Biology Exam

In spring 2012, all students taking biology will participate in an end-of-course exam as directed by the 2010 Engrossed Substitute Senate Bill 6444, section 513 (3). Students in 10th grade who are not in biology are still required to take the biology EOC because of the No Child Left Behind requirement to assess science in high school.

The biology EOC, like the math EOCs, will be administered within the last three weeks of the school year. Students in the class of 2015 and beyond must pass a science exam in order to graduate. Please download the OSPI Math and Science EOC Policies handout for more information.

The biology EOC is based on the revised K-12 Science Learning Standards and will be given to students in grades 7-12 who are taking biology. OSPI recommended the Legislature fund two additional science EOCs, but it’s likely that won’t occur until at least 2017.

House Bill 1410, signed into law in May 2011, altered the science assessment graduation requirements, meaning:

- **Students in the class of 2012** are not affected by this legislation. Those students do not have to pass a state science exam or take it in spring 2012.
- **Students in the classes of 2013 and 2014** are no longer required to pass a state science exam. Students in the class of 2014 (10th graders) must take the biology EOC in spring 2012 whether they are in the biology or not. This is required by the No Child Left Behind Act, where all students must be assessed in high school science.
- **Beginning with the class of 2015**, students are required to pass the biology EOC. Those students can first take the biology EOC in spring 2012.

Questions?

FAQ: Biology Webinar, Sept. 27, 2011 (PDF)

Biology EOC and the science graduation requirement: gradreq@k12.wa.us

January 9, 2012 Webinar Recording
Preparing for the Biology End of Course Exam (WMV, 60 MB)

Washington Science Teachers Association is hosting a workshop to assist teachers in preparing students for the Biology EOC in Bremerton at OESD 114 on February 28, 2012.
Here is a single page document outlining high school assessment and graduation requirements for the classes of 2012-2015.

**2011-2012 Science Assessment and Graduation Update**

OSPI is gathering and posting resources to help teachers prepare students for the Biology EOC. The growing collection is located at [Biology End of Course Supports Moodle](#).

**Welcome to the Life Science Instructional Supports Moodle**

This is a site for educators to share resources and collaborate around the content of Life Science, Systems, Inquiry and Application. Uploaded resources will not be reviewed by OSPI staff, but instead is the responsibility of the teacher to analyze resources and determine if they suit the needs of their students. The site will continued to be updated throughout the year as new materials are identified. If there are questions regarding the use of this site, please email [Ellen.Ebert@k12.wa.us](mailto:Ellen.Ebert@k12.wa.us) or [Breanne.Conley@k12.wa.us](mailto:Breanne.Conley@k12.wa.us). This Moodle contains the following sections:

- Section 1: Biology End of Course Assessment Information
- Section 2: K-12 Science Learning Standards
- Section 3: Summary Documents for 9-12 Life Science Standards and 9-12 Systems, Application and Inquiry Standards
- Section 4: Learning Supports for the 9-12 Life Science Standards
- Section 5: Discussion Forums
- Section 6: Teacher-Created Resources Database
- Section 7: Elements of Effective Science Instruction (EESI)
- Section 8: Teacher Instructional Supports Tool Box