Common Core State Standards

- Define the knowledge and skills students need for college and career
- Developed voluntarily and cooperatively by states; more than 40 states have adopted
- Provide clear, consistent standards in English language arts/literacy and mathematics

Source: www.corestandards.org
The Assessment Challenge

How do we get from here...

Common Core State Standards specify K-12 expectations for college and career readiness

...to here?

All students leave high school college and career ready

...and what can an assessment system do to help?

Smarter Balanced Assessment Consortium
Concerns with Today's Statewide Assessments

Each state pays for its own assessments
- Each state bears the burden of test development; no economies of scale

Based on state standards
- Students in many states leave high school unprepared for college or career

Heavy use of multiple choice
- Inadequate measures of complex skills and deep understanding

Results delivered long after tests are given
- Tests cannot be used to inform instruction or affect program decisions

Accommodations for special education and ELL students vary
- Difficult to interpret meaning of scores; concerns about access and fairness

Most administered on paper
- Costly, time consuming, and challenging to maintain security
Next Generation Assessments

The U.S. Department of Education has funded two consortia of states with development grants for new assessments aligned to college- and career-ready standards.

- Rigorous assessment of progress toward “college and career readiness”
- **Common cut scores** across all Consortium states
- Provide both achievement and growth information
- Valid, reliable, and fair for all students, except those with “significant cognitive disabilities”
- Administer **online**
- Use **multiple** measures
- **Operational in 2014-15** school year

Source: Federal Register / Vol. 75, No. 68 / Friday, April 9, 2010 pp. 18171-85
The Purpose of the Consortium

• To develop a comprehensive and innovative assessment system for grades 3-8 and high school in English language arts and mathematics aligned to the Common Core State Standards, so that...

• ...students leave high school prepared for postsecondary success in college or a career through increased student learning and improved teaching

[The assessments shall be operational across Consortium states in the 2014-15 school year]
A National Consortium of States

- 23 member states and territories
- 21 Governing States, 1 Advisory State, 1 Affiliate Member
- Washington state is fiscal agent
- WestEd provides project management services
State Led

Committed to Transparency
State-Led Governance

States Join Consortium as Governing or Advisory State

- Governors
- Education Chiefs
- State Legislatures
- State Boards of Education

State Representatives Serve on Executive Committee

- 2 elected co-chairs
- 4 representatives elected by governing states
- Lead procurement state (WA)
- Higher education representatives

Smarter Balanced Staff

WestEd, Project Management Partner

Advisory Committees
## Who We Are

### Executive Committee
- **Co-Chairs:** Deb Sigman (CA), Joseph Martineau, Ph.D. (MI)
- **Committee:** Juan D’Brot (WV); Michael Hock, Ph.D. (VT); Mike Middleton (WA); Luci Willits (ID); Charles Lenth, Ph.D. (SHEEO-Higher Education Representative); Patricia Reiss, Ph.D. (HI); Beverly Young, Ph.D. (CA-Higher Education Representative)

### Staff
- **Executive Director:** Joe Willhoft, Ph.D.
- **Chief Operating Officer:** Tony Alpert
- **Lead Psychometrician:** Marty McCall, Ph.D.
- **Chief Technology Officer:** Brandt Redd
- **Director of Higher Education Collaboration:** Jacqueline King, Ph.D.
- **Director of English Language Arts / Literacy:** Nikki Elliott-Schuman
- **Director of Mathematics:** Shelbi Cole, Ph.D.
- **Director of Support for Under-Represented Students / Director of System Design:** Magda Chia, Ph.D.
- **Director of Professional Learning:** Chrystyna V. Mursky, Ph.D.
- **Director of State Services:** Dacia Hopfensperger
- **Communications Associate:** Nicole Siegel

### Advisors
- **Project Management:** WestEd (Stanley Rabinowitz, Ph.D., PMP Director)
- **Policy Coordinator:** Sue Gendron, Ph.D. (former Maine Education Commissioner)
- **Senior Research Advisor:** Linda Darling-Hammond, Ph.D. (Stanford University)
**Consortium Work Groups**

**Work group engagement of 100 state-level staff:**

Each work group:
- Led by co-chairs from governing states
- 8 or more members from advisory or governing states and 3-4 higher education representatives
- 1-2 liaisons from the Executive Committee
- 1 WestEd partner

**Work group responsibilities:**

- Define scope and time line for work in its area
- Develop a work plan and resource requirements
- Determine and monitor the allocated budget
- Oversee Consortium work in its area, including identification and direction of vendors

1. Formative Assessment Practices/Transition to Common Core State Standards
2. Item Development/Performance Tasks
3. Technology Approach/Reporting
4. Test Administration/Student Access
5. Validation and Psychometrics/Test Design
Technical Advisory Committee

Jamal Abedi, Ph.D.
   UC Davis/CRESST

Randy Bennett, Ph.D.
   ETS

Derek C. Briggs, Ph.D.
   University of Colorado

Gregory J. Cizek, Ph.D.
   University of North Carolina

David T. Conley, Ph.D.
   University of Oregon

Linda Darling-Hammond, Ph.D.
   Stanford University

Brian Gong, Ph.D.
   The Center for Assessment

Edward Haertel, Ph.D.
   Stanford University

Joan Herman, Ph.D.
   UCLA/CRESST

G. Gage Kingsbury, Ph.D.
   Psychometric Consultant

James W. Pellegrino, Ph.D.
   University of Illinois, Chicago

W. James Popham, Ph.D.
   UCLA, Emeritus

Joseph Ryan, Ph.D.
   Arizona State University

Martha Thurlow, Ph.D.
   University of Minnesota/NCEO
A Balanced Assessment System

Common Core State Standards specify K-12 expectations for college and career readiness.

Summative assessments
Benchmarked to college and career readiness

Teachers and schools have information and tools they need to improve teaching and learning.

Teacher resources for formative assessment practices to improve instruction.

Interim assessments
Flexible, open, used for actionable feedback.

All students leave high school college and career ready.

Smarter Balanced Assessment Consortium
A Balanced Assessment System

ELA/Literacy and Mathematics, Grades 3-8 and High School

DIGITAL LIBRARY of formative tools, processes and exemplars; released items and tasks; model curriculum units; educator training; professional development tools and resources; scorer training modules; and teacher collaboration tools.

Optional Interim Assessment
- Computer Adaptive Assessment and Performance Tasks

Optional Interim Assessment
- Computer Adaptive Assessment and Performance Tasks

Performance Tasks
- ELA/literacy
- Mathematics

Computer Adaptive Assessment
- ELA/literacy
- Mathematics

Summative Assessment for Accountability

Re-take option available

Scope, sequence, number and timing of interim assessments locally determined

*Time windows may be adjusted based on results from the research agenda and final implementation decisions.
Using Computer Adaptive Technology for Summative and Interim Assessments

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased precision</td>
<td>Provides accurate measurements of student growth over time</td>
</tr>
<tr>
<td>Tailored for Each Student</td>
<td>Item difficulty based on student responses</td>
</tr>
<tr>
<td>Increased Security</td>
<td>Larger item banks mean that not all students receive the same questions</td>
</tr>
<tr>
<td>Shorter Test Length</td>
<td>Fewer questions compared to fixed form tests</td>
</tr>
<tr>
<td>Faster Results</td>
<td>Turnaround time is significantly reduced</td>
</tr>
<tr>
<td>Mature Technology</td>
<td>GMAT, GRE, COMPASS (ACT), Measures of Academic Progress (MAP)</td>
</tr>
</tbody>
</table>
K-12 Teacher Involvement

- Support for implementation of the Common Core State Standards (2011-12)
- Write and review items/tasks for the pilot test (2012-13) and field test (2013-14)
- Development of teacher leader teams in each state (2012-14)
- Evaluate formative assessment practices and curriculum tools for inclusion in digital library (2013-14)
- Score portions of the interim and summative assessments (2014-15 and beyond)
Higher Education Collaboration

- Involved 175 public and 13 private systems/institutions of higher education in application
- Two higher education representatives on the Executive Committee
- Higher education lead in each state and higher education faculty participating in work groups
- Goal: The high school assessment qualifies students for entry-level, credit-bearing coursework in college or university
Assessment System Components

Summative Assessment (Computer Adaptive)

• Assesses the full range of Common Core in English language arts and mathematics for students in grades 3–8 and 11 (interim assessments can be used in grades 9 and 10)
• Measures current student achievement and growth across time, showing progress toward college and career readiness
• Administered within the last 12 weeks of the instructional year
• Includes a variety of question types: selected response, short constructed response, extended constructed response, technology enhanced, and performance tasks
Assessment System Components

<table>
<thead>
<tr>
<th>Interim Assessment (Computer Adaptive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Optional comprehensive and content-cluster assessment to help identify specific needs of each student</td>
</tr>
<tr>
<td>• Can be administered throughout the year</td>
</tr>
<tr>
<td>• Provides clear examples of expected performance on Common Core standards</td>
</tr>
<tr>
<td>• Includes a variety of question types: selected response, short constructed response, extended constructed response, technology enhanced, and performance tasks</td>
</tr>
<tr>
<td>• Aligned to and reported on the same scale as the summative assessments</td>
</tr>
<tr>
<td>• Fully accessible for instruction and professional development</td>
</tr>
</tbody>
</table>
## Assessment System Components

**Performance Tasks**

- Extended projects demonstrate real-world writing and analytical skills
- May include online research, group projects, presentations
- Require 1-2 class periods to complete
- Included in both interim and summative assessments
- Applicable in all grades being assessed
- Evaluated by teachers using consistent scoring rubrics

*The use of performance measures has been found to increase the intellectual challenge in classrooms and to support higher-quality teaching.*

- Linda Darling-Hammond and Frank Adamson, Stanford University
Assessment System Components

Formative Assessment Practices

- Research-based, on-demand tools and resources for teachers
- Aligned to Common Core, focused on increasing student learning and enabling differentiation of instruction
- Professional development materials include model units of instruction and publicly released assessment items, formative strategies

“Few initiatives are backed by evidence that they raise achievement. Formative assessment is one of the few approaches proven to make a difference.”

- Stephanie Hirsh, Learning Forward
Assessment System Components

Online Reporting

- Static and dynamic reports, secure and public views
- Individual states retain jurisdiction over access and appearance of online reports
- Dashboard gives parents, students, practitioners, and policymakers access to assessment information
- Graphical display of learning progression status (interim assessment)
- Feedback and evaluation mechanism provides surveys, open feedback, and vetting of materials

“Data are only useful if people are able to access, understand and use them… For information to be useful, it must be timely, readily available, and easy to understand.”

- Data Quality Campaign
Support for Special Populations

- Accurate measures of progress for students with disabilities and English Language Learners
- Accessibility and Accommodations Work Group engaged throughout development
- Outreach and collaboration with relevant associations

“Common-Core Tests to Have Built-in Accommodations”
- June 8, 2011
## Technology Strategy Framework and System Requirements

### Hardware and Software Requirements Overview

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Minimum Smarter Balanced Requirements for Current Computers</th>
<th>Recommended Smarter Balanced Minimum for New Purchases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>Windows XP (service pack 3)</td>
<td>Windows 7+</td>
</tr>
<tr>
<td></td>
<td>Pentium 233 MHz processor</td>
<td>1 GHz processor</td>
</tr>
<tr>
<td></td>
<td>128 MB RAM</td>
<td>1 GB RAM</td>
</tr>
<tr>
<td></td>
<td>52 MB hard drive free space</td>
<td>80 GB hard drive or at least 1GB of hard drive space available</td>
</tr>
<tr>
<td>Mac OS X</td>
<td>Mac OS X 10.4.4</td>
<td>Mac OS X 10.7+</td>
</tr>
<tr>
<td></td>
<td>Macintosh computer with Intel x86 or PowerPC G3 (300 MHz) processor, 256 MB RAM, 200 MB hard drive free space</td>
<td>1GHz processor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1GB RAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 GB hard drive or at least 1GB of hard drive space available</td>
</tr>
<tr>
<td>Linux</td>
<td>Linux (Ubuntu 9-10, Fedora 6)</td>
<td>Linux</td>
</tr>
<tr>
<td></td>
<td>Pentium II or AMD K6-III</td>
<td>(Ubuntu 11.10, Fedora 16)</td>
</tr>
<tr>
<td></td>
<td>233 MHz processor</td>
<td>1 GHz processor</td>
</tr>
<tr>
<td></td>
<td>64 MB RAM</td>
<td>1 GB RAM</td>
</tr>
<tr>
<td></td>
<td>52 MB hard drive free space</td>
<td>80 GB hard drive or at least 1GB of hard drive space available</td>
</tr>
<tr>
<td>iOS</td>
<td>iPads 2 running iOS6</td>
<td>iPads 3+ running iOS6</td>
</tr>
<tr>
<td>Android</td>
<td>Smarter Balanced-certified*</td>
<td>Smarter Balanced-certified*</td>
</tr>
<tr>
<td></td>
<td>Android-based tablets running Android 4.0+</td>
<td>Android-based tablets running Android 4.0+</td>
</tr>
<tr>
<td>Chrome OS</td>
<td>Chromebooks running Chrome OS (rolling release)</td>
<td>Chromebooks running Chrome OS (rolling release)</td>
</tr>
</tbody>
</table>

### Minimum Computer Requirements

Minimum requirements represent a low compliance threshold. Districts should attempt to exceed these requirements as many machines operating at these levels could struggle with sufficient on-board memory and processing to run secure browsers as well as other simultaneous running programs accumulated on the device over time.

1. The minimum Smarter Balanced requirements are generally equivalent to the minimum requirements of the associated eligible operating system. Users should refer to the minimum requirements of the operating systems as a means of resolving any ambiguities in the minimum Smarter Balanced requirements.

2. These guidelines do not supersede the minimum requirements of the operating systems.

3. Hardware choices should consider the individual needs of students. Some students may need hardware that exceeds these minimum guidelines, and some students may require qualitatively different hardware. Tablets may require the use of a mouse.

*The Smarter Balanced “Device Certification Process” includes the certification of specific device models from manufacturers, including, but not limited to, Android-based devices.*
## Technology Strategy Framework and System Requirements

### Minimum Requirements for Other Devices

Minimum requirements represent a low compliance threshold. Ultimately, districts should attempt to exceed these requirements as many machines operating at these levels could struggle with sufficient on-board memory and processing to run secure browsers as well as other simultaneous running programs accumulated on the device over time.

### Additional Requirements Applicable across Operating Systems

<table>
<thead>
<tr>
<th>Device Requirements</th>
<th>Minimum Smarter Balanced Requirements for Current Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen Size</td>
<td>10” class or larger with 1024 x 768 resolution</td>
</tr>
<tr>
<td>Headphones / earphones</td>
<td>Available to students for use during the English language arts test and for students who require text-to-speech features on the mathematics test</td>
</tr>
<tr>
<td>Security</td>
<td>The device must have the administrative tools and capabilities to temporarily disable features, functionalities, and applications that could present a security risk during test administration.</td>
</tr>
<tr>
<td>Keyboards</td>
<td>External keyboards are required in all cases unless specified differently by a student’s Individualized Education Program (IEP) or 504 plan. Any form of external keyboard that disables the on-screen virtual keyboard is acceptable. This includes mechanical, manual, plug and play, and wireless-based (e.g., Bluetooth, RF, IR) keyboards. The intent of this specification is to ensure the required display area is available to allow students to read multiple sources of complex item text and respond to source evidence for analytical purposes. While wireless keyboards are permissible, districts should be aware that high-density deployments of wireless keyboards and mice might interfere with each other or with the wireless network. Therefore, they should test the room configuration before the examination date and consider wired alternatives.</td>
</tr>
<tr>
<td>Pointing Device</td>
<td>A pointing device must be included. This may consist of a mouse, touch screen, touchpad, or other pointing device with which the student is familiar.</td>
</tr>
<tr>
<td>Form Factors</td>
<td>No restriction as long as the device meets the other stated requirements. These forms include desktops, laptops, netbooks, virtual desktops and thin clients (iPad, Windows, Chromebooks, and Android), and hybrid laptop/tablets.</td>
</tr>
<tr>
<td>Network</td>
<td>Must connect to the Internet with a minimum of 20 Kbps available per student to be tested simultaneously. Local Web proxy caching servers are not recommended.</td>
</tr>
</tbody>
</table>

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4 The resources (e.g., memory and processors) available to each client need to be equivalent or greater to the requirements for standalone hardware.
Timeline

Formative Processes, Tools, and Practices Development Begins

Summative Master Work Plan Developed and Work Groups Launched

Writing and Review of Pilot Items/Tasks (including Cognitive Labs and Small-Scale Trials)

Writing and Review of Field Test Items/Tasks (throughout the school year)

Field Testing of Summative and Interim Items/Tasks Conducted

Final Achievement Standards (Summative) Verified and Adopted

Procurement Plan Developed

Content and Item Specifications Development

Pilot Testing of Summative and Interim Items/Tasks Conducted

Preliminary Achievement Standards (Summative) Proposed and Other Policy Definitions Adopted

Operational Summative Assessment Administered
Find Out More

Smarter Balanced can be found online at:

[SmarterBalanced.org]