

SMARTER

Balanced Assessment Consortium

Alliance for Excellent Education

September 13, 2011

Washington DC



Assessment System Update

Work Plan Procurement Schedule

- Collaborative/Transparent Process
- 1100 Comments
- July 21-22 Meeting of SBAC States and Vendor Community
- Comprehensive Plan

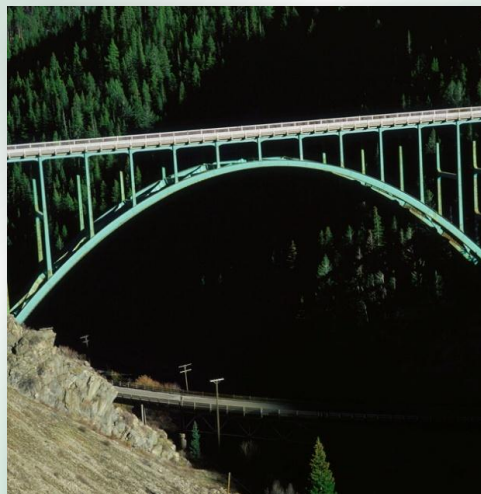


ELA/Literacy Content Specifications Overview

An Overview of SBAC's Approach to Evidence-Based Design

Content Specifications ...

- Create a bridge between standards and assessment and, ultimately, instruction
- Organize the standards around major constructs & big ideas
- Express what students should learn and be able to do



An Overview of SBAC's Approach to Evidence-Based Design

Claims and Evidence

- Clarify ***what*** abilities students should develop and ***how we will know*** what students understand and can do
- Provide a ***disciplined approach*** to creating assessments that will allow us to both guide and evaluate what we do

Prototypes

- Exemplar items and tasks (along with rubrics) illustrate *how* the abilities should be assessed
- Annotations of prototypes explain key features that are important to good measurement of the constructs

5 Major Claims for ELA/Literacy & Literacy

- **Claim #1** – Students can read closely & critically to comprehend a range of increasingly complex literary and informational texts.
- **Claim #2** – Students can produce effective writing for a range of purposes and audiences.
- **Claim #3** – Students can employ effective speaking and listening skills for a range of purposes and audiences.
- **Claim #4** – Students can engage appropriately in collaborative and independent inquiry to investigate/research topics, pose questions, and gather and present information.
- **Claim #5** – Students can use oral and written language skillfully across a range of literacy tasks.

Each claim is described for assessment

- Rationale for each claim
 - Why is this learning goal important for College & Career Readiness (CCR)?
 - What does the research say about learning in this area?
- What does ‘sufficient’ evidence look like?
 - What types of items/tasks?
 - What content/texts will be emphasized?
- What are some suggested reporting categories?



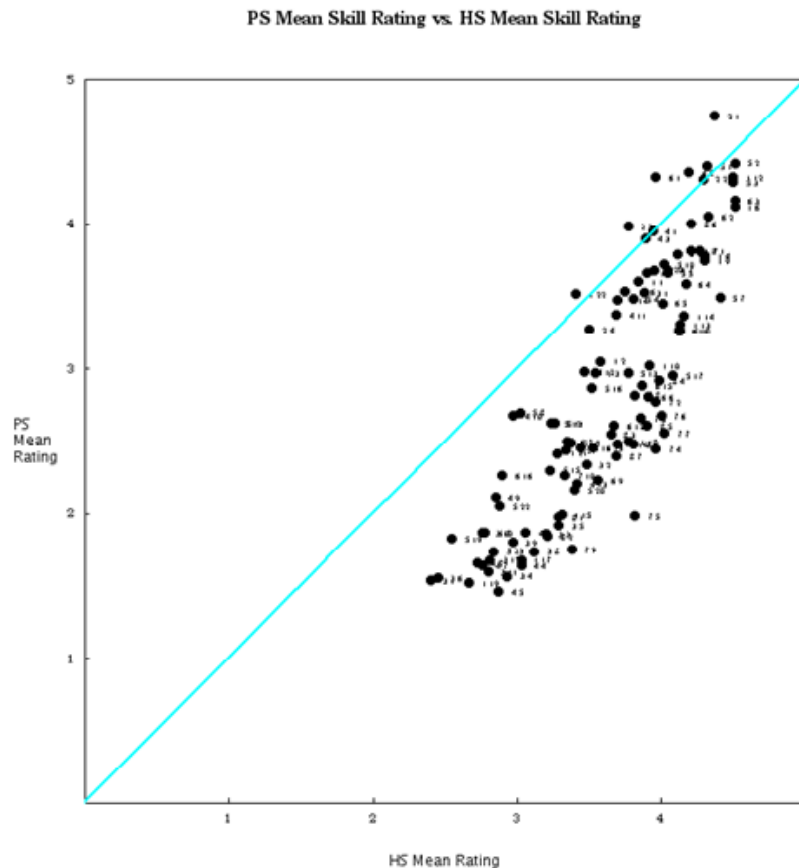
Overview of Mathematics Priorities

Design of the Mathematics Standards

COMMON CORE STATE STANDARDS for MATHEMATICS	
Sample of Works Consulted Existing state standards documents. Research summaries and briefs provided to the Working Group by researchers. National Assessment Governing Board, <i>Mathematics Framework for the 2009 National Assessment of Educational Progress</i>. U.S. Department of Education, 2008. NAEP Validity Studies Panel, <i>Validity Study of the NAEP Mathematics Assessment: Grades 4 and 8</i>. Daro et al., 2007. Mathematics documents from: Alberta, Canada; Belgium; China; Chinese Taipei; Denmark; England; Finland; Hong Kong; India; Ireland; Japan; Korea; New Zealand; Singapore; Victoria (British Columbia). Adding It Up: Helping Children Learn Mathematics. National Research Council, Mathematics Learning Study Committee, 2001. Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education. National Governors' Association, Council of Chief State School Officers, and Achieve, Inc., 2008. Crossroads in Mathematics (1995) and Beyond Crossroads (2006). Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence. National Council of Teachers of Mathematics, 2006. Focus in High School Mathematics: Reasoning and Sense Making. National Council of Teachers of Mathematics. Reston, VA: NCTM. Foundations for Success: The Final Report of the National Mathematics Advisory Panel. U.S. Department of Education: Washington, D.C., 2008. Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A PreK-12 Curriculum Framework. How People Learn: Brain, Mind, Experience, and School. Bransford, J.D., Brown, A.L., and Cocking, R.R., eds. Committee on Developments in the Science of Learning: Commission on Behavioral and Social Sciences and Education, National Research Council, 1999. Mathematics and Democracy: The Case for Quantitative Literacy. Steen, L.A. (ed.). National Council on Education and the Disciplines, 2001. Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity. Cross, C.T., Woods, T.A., and Schweingruber, S., eds. Committee on Early Childhood Mathematics, National Research Council, 2009. The Opportunity Equation: Transforming Mathematics and Science Education for Citizenship and the Global Economy. The Carnegie Corporation of New York and the Institute for Advanced Study, 2009. Online: http://www.opportunityequation.org/ Principles and Standards for School Mathematics. National Council of Teachers of Mathematics, 2000. The Proficiency Illusion. Cronin, J., Dahlin, H., Adkins, D., and Kingsburg, G.S., foreword by C.E. Finn, Jr. and M. J. Petrilli. Thomas B. Fordham Institute, 2007. Ready or Not: Creating a High School Diploma That Counts. American Diploma Project, 2004. A Research Companion to Principles and Standards for School Mathematics. National Council of Teachers of Mathematics, 2005. Sizing Up State Standards 2008. American Federation of Teachers, 2008. A Splintered Vision: An Investigation of U.S. Science and Mathematics Education. Schmidt, W.H., McKnight, C.C., Raizen, S.A., et al. U.S. National Research Center for the Third International Mathematics and Science Study. Michigan State University, 1997. Stars By Which to Navigate? Scanning National and International Education Standards in 2009. Carmichael, S.B., Wilson, W.S., Finn, Jr., C.E., Winkler, A.M., and Palmieri, S. Thomas B. Fordham Institute, 2009. Askey, R., "Knowing and Teaching Elementary Mathematics," <i>American Educator</i>, Fall 1998. Aydogan, C., Plummer, C., Kang, S. J., Billrey, C., Farran, D. C., & Lipsey, M. W. (2005). An investigation of prekindergarten curricula: Influences on classroom characteristics and child engagement. Paper presented at the NAEYC. Blum, W., Walbrath, P. L., Hann, H-W, and Niss, M. (Eds) <i>Applications and Modeling in Mathematics Education</i>, ICHI Study 14. Amsterdam: Springer. Brosterman, N. (1997). <i>Inventing Kindergarten</i>. New York: Harry N. Abrams. Clements, D. H., & Sarama, J. (2009). <i>Learning and teaching early math: The learning trajectories approach</i>. New York: Routledge. Clements, D. H., Sarama, J., & DiBisce, A.-M. (2004). Clements, D. H., Sarama, J., & DiBisce, A.-M. (2004). <i>Engaging young children in mathematics: Standards for early childhood mathematics education</i>. Mahwah, NJ: Lawrence Erlbaum Associates. Cobb and Moore, "Mathematics, Statistics, and Teaching," <i>Amer. Math. Monthly</i> 104(9), pp. 801-823, 1997. Confrey, J., "Tracing the Evolution of Mathematics Content Standards in the United States: Looking Back and Projecting Forward," K12 Mathematics Curriculum Standards conference proceedings, February 5-6, 2007. Conley, D.T. <i>Knowledge and Skills for University Success</i>, 2008. Conley, D.T. <i>Toward a More Comprehensive Conception of College Readiness</i>, 2007. Cuomo, A., Goldenberg, E. P., and Mark, J., "Habits of Mind: An Organizing Principle for a Mathematics Curriculum," <i>Journal of Mathematical Behavior</i>, 15(4), 375-402, 1996. Carpenter, T. P., Fennema, E., Franke, M. L., Levi, L., & Empson, S. B. (1989). <i>Children's Mathematics: Cognitively Guided Instruction</i>. Portsmouth, NH: Heinemann. Van de Walle, J. A., Karp, K., & Bay-Williams, J. M. (2010). <i>Elementary and Middle School Mathematics: Teaching Developmentally</i> (Seventh ed.). Boston: Allyn and Bacon. Ginsburg, A., Leinwand, S., and Decker, K., "Informing Grades 1-8 Standards Development: What Can Be Learned from High-Performing Hong Kong, Korea, and Singapore?" American Institutes for Research, 2009. Ginsburg et al., "What the United States Can Learn From Singapore's World-Class Mathematics System (and what Singapore can learn from the United States)," American Institutes for Research, 2005. Ginsburg et al., "Reassessing U.S. International Mathematics Performance: New Findings from the 2003 TIMSS and PISA," American Institutes for Research, 2005. Ginsburg, H. P., Lee, J. S., & Stevenson-Boyd, J. (2008). <i>Mathematics education for young children: What it is and how to promote it</i>. Social Policy Report, 22(1), 1-24. Harel, G., "What is Mathematics? A Pedagogical Answer to a Philosophical Question," in R. B. Gold and R. Simons (eds.), <i>Current issues in the Philosophy of Mathematics from the Perspective of Mathematicians</i>. Mathematical Association of America, 2008. Henry, V. J., & Brown, R. S. (2008). First-grade basic facts: An investigation into teaching and learning of an accelerated, high-demand memorization standard. <i>Journal for Research in Mathematics Education</i>, 39, 153-183. Howe, R., "From Arithmetic to Algebra." Howe, R., "Starting Off Right in Arithmetic," http://math.azona.edu/~hmc/2008-09/HME/BagArith.pdf. Jordan, N. C., Kaplan, D., Ramineni, C., and Locuniak, M. N., "Early math matters: kindergarten number competence and later mathematics outcomes," <i>Dev. Psychol.</i> 45, 850-867, 2009. Kader, G., "Means and MADS," <i>Mathematics Teaching in the Middle School</i>, 4(6), 1999, pp. 398-403. Kilpatrick, J., Mesa, V., and Sloane, F., "U.S. Algebra Performance in an International Context," in Loveless (ed.), <i>Lessons Learned: What International Assessments Tell Us About Math Achievement</i>. Washington, D.C.: Brookings Institution Press, 2007. Leinwand, S., and Ginsburg, A., "Measuring Up: How the Highest Performing State (Massachusetts) Compares to the Highest Performing Country (Hong Kong) in Grade 3 Mathematics," American Institutes for Research, 2009. Niss, M., "Quantitative Literacy and Mathematical Competencies," in Quantitative Literacy: Why Numeracy Matters for Schools and Colleges, Madison, B. L., and Steen, L.A. (eds.), National Council on Education and the Disciplines. Proceedings of the National Forum on Quantitative Literacy held at the National Academy of Sciences in Washington, D.C., December 1-2, 2001. Pratt, C. (1948). I learn from children. New York: Simon and Schuster. Reys, B. (ed.), <i>The Intended Mathematics Curriculum as Represented in State-Level Curriculum Standards: Consensus or Confusion?</i> IAP-Information Age Publishing, 2006. Sarama, J., & Clements, D. H. (2009). <i>Early childhood mathematics education research: Learning trajectories for young children</i>. New York: Routledge. Schmidt, W., Houang, R., and Cogan, L., "A Coherent Curriculum: The Case of Mathematics," <i>American Educator</i>, Summer 2002, p. 4.	

Postsecondary instructors want deeper mastery of fewer things

Postsecondary vs. High school skill ratings



International Comparisons

**Mathematics
Topics
intended at
each grade
by at least
two-thirds of
A+ countries**

	K	1	2	3	4	5	6	7	8
Whole number meaning		■	■	■	■	■			
Whole number operations		■	■	■	■	■			
Measurement Units		□	■	■	■	■	■	■	
Common fractions				□	■	■	■		
Equations & Formulas				□	■	■	■	■	■
Data Representation & Analysis				□	■	■	■		□
2-D Geometry: Basics				□	■	■	■	■	■
Polygons & Circles					■	■	■	■	■
Perimeter, Area & Volume					■	■	■	■	□
Rounding & Significant Figures					■	■			
Estimating Computations					■	■	■		
Properties of Whole Number Operations					□	■			
Estimating Quantity & Size					□	□			
Decimal Fractions					■	■	■		
Relationship of Common & Decimal Fractions					■	■	■		
Properties of Common & Decimal Fractions						■	■		
Percentages						■	■		
Proportionality Concepts						■	■	■	□
Proportionality Problems						■	■	■	■
2-D Coordinate Geometry						□	□	■	■
Geometry: Transformations							■	■	■
Negative Numbers, Integers & Their Properties							□	■	
Number Theory								■	□
Exponents, Roots & Radicals								■	■
Exponents & Orders of Magnitude								□	□
Measurement Estimation & Errors								□	
Constructions w/Straightedge & Compass								■	□
3-D Geometry								■	■
Congruence & Similarity									■
Rational Numbers & Their Properties									□
Patterns, Relations & Functions									□
Slope & Trigonometry									□
Number of topics checked in 2/3 of A+ countries		3	3	7	15	20	17	16	18
Number of additional topics in A+ countries		2	6	5	1	1	3	6	3

- Focus
- Coherence

Focus and Coherence

- Common Core State Standards for Mathematics (CCSSM) were designed to address the “mile-wide, inch-deep” problem in standards and textbooks
- Focus means spending more time on fewer things at each given grade level.
- Coherence means structuring learning so that math makes sense.
- Focus and coherence are built into the Standards and are meant to work together.

Preserving Focus and Coherence in Implementation

- Curriculum
- Instruction
- Teacher education and professional development
- Assessment

Implementation Challenges

- Mile-wide/inch-deep traditions
- Attaining CCSSM balance
 - conceptual understanding
 - procedural skill
 - application
- Connecting content and practices
- Grain size in CCSSM
- Psychometric culture



Making
implicit
priorities
explicit

Preserving Focus and Coherence by Setting Sound Priorities in K-8

- Follow contours of progressions in the standards
 - Ensure sufficient attention is paid to key beginnings
 - Ensure attainment of key ends
 - Balance “journey” and “endpoint”
- Reveal shifts in focus from grade to grade
- Ensure that sufficient resources are being focused on keeping students on-track to college and career readiness

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to Precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.

...

In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.

In a few words:

Students should learn both the core mathematical knowledge described earlier in this presentation, and the core mathematical practices listed above.

Assessment should provide students the opportunity to demonstrate their proficiency with both content and practices.

Accordingly, SBAC Assessments focus on these CLAIMS regarding student proficiency

Claim #1: Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.

Claim #2: Students can frame and solve a range of complex problems in pure and applied mathematics.

Claim #3: Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

Claim #4: Students can analyze complex, real-world scenarios and can use mathematical models to interpret and solve problems.

SBAC Content Specifications and Content Mapping Development Timelines and Activities

#	Review Steps	Date
1	Internal Review Start: ELA/Literacy - ELA/Literacy content specifications distributed to specific work groups for preliminary review and feedback	07/05 (Tue)
2	Internal Review Due: ELA/Literacy - Emailed to SBAC	07/15 (Fri)
3	Technical Advisory Committee (TAC) Review Liaison Review: ELA/Literacy - Draft submitted to TAC for review, comment, and feedback	07/27 (Wed)
4	Webinar: ELA/Literacy (Including Evidence-Based Design Orientation) - Orientation to Evidence-Based Design and walkthrough of draft ELA/Literacy specifications document	08/08 (Mon)
5	Release for Review: ELA/Literacy (Round 1) - ELA/Literacy specifications documents posted on SBAC Web site & emailed to stakeholder groups	08/09 (Tue)
6	Internal Review Start: Mathematics - Mathematics content specifications distributed to specific work groups for preliminary review and feedback	08/10 (Wed)
7	Technical Advisory Committee (TAC) Review Liaison Review: Mathematics - Draft submitted to TAC for review, comment, and feedback	08/10 (Wed)
8	Internal Review Due: Mathematics - Emailed to SBAC	08/15 (Mon)
9	Release to Item Specifications to Bidders: ELA/Literacy and Mathematics - Current drafts of ELA/Literacy and Mathematics content specifications posted to OSPI Web site to support Item Specifications RFP process	08/15 (Mon)
10	Updated Release of Specifications to Bidders: ELA/Literacy & Mathematics - Updated content specifications (as necessary) posted on OSPI Web site to support Item Specifications RFP process	08/22 (Mon)
11	Webinar: Mathematics (Including Evidence-Based Design Orientation) - Walkthrough of the draft Mathematics specifications document	08/22 (Mon)
12	Release for Review: Mathematics (Round 1) - Mathematics content specifications posted on SBAC External Site & emailed to stakeholder groups	08/22 (Mon)
13	Feedback Due: ELA/Literacy (Round 1) - Emailed to SBAC	08/29 (Mon)
14	Feedback Due: Mathematics (Round 1) - Emailed to SBAC	09/12 (Mon)
15	Release for Review: ELA/Literacy (Round 2) - ELA/Literacy content specifications posted on SBAC External Site & emailed to stakeholder groups	09/19 (Mon)
16	Feedback Due: ELA/Literacy (Round 2) - Emailed to SBAC	09/26 (Mon)
17	Final Content Specifications and Content Mapping Released: ELA/Literacy - Final ELA/Literacy content specifications and content mapping posted to External Web site; email notification sent to member states and partner organizations	10/03 (Mon)
18	Release for Review: Mathematics (Round 2) - Mathematics content specifications posted on SBAC External Site & emailed to stakeholder groups	10/03 (Mon)
19	Feedback Due: Mathematics (Round 2) - Emailed to SBAC	10/10 (Mon)
20	Final Content Specifications and Content Mapping Released: Mathematics - Final Mathematics content specifications and content mapping posted to External Site; email notification sent to member states and partner organizations	10/17 (Mon)



Communications

GMMB/ Stakeholder Research Approach

- Bipartisan, public opinion research team
- Phase 1 (July–August 2011)
 - Goal: Gain initial understanding of perceptions of SMARTER Balanced in member states and among key influencers
 - Approach: One-on-one interviews with state K-12 and higher education officials, policymakers, and education organizations; focus groups with state and national education membership organizations
- Phase 2 (September–December 2011)
 - Goal: Test messaging for key target audiences and track shifts in awareness over time
 - Approach: Focus groups with teachers, principals, state policymakers; quantitative national survey



System Architecture

Technology Survey

- Transition to online assessment
- Understanding capacity of local education units
- Monitor progress
- Provide recommendations to each state
- Inform National Policy
 - Broadband Plan
 - ESEA reauthorization
 - Federal budget – technology investments



Transition Planning

SCASS/Implementing Common Core State Standards

- Partnership with Council of Chief State School Officers
- System Emphasis
- Resource Portal
- Meet three times per month
- Coaching support to each State Education Team
 - Monthly calls with Chiefs
 - Monthly calls with team

**Professional
Learning**

**Common Core
State
Standards**

**Curriculum and
Instruction
Materials**

**Data
Systems**

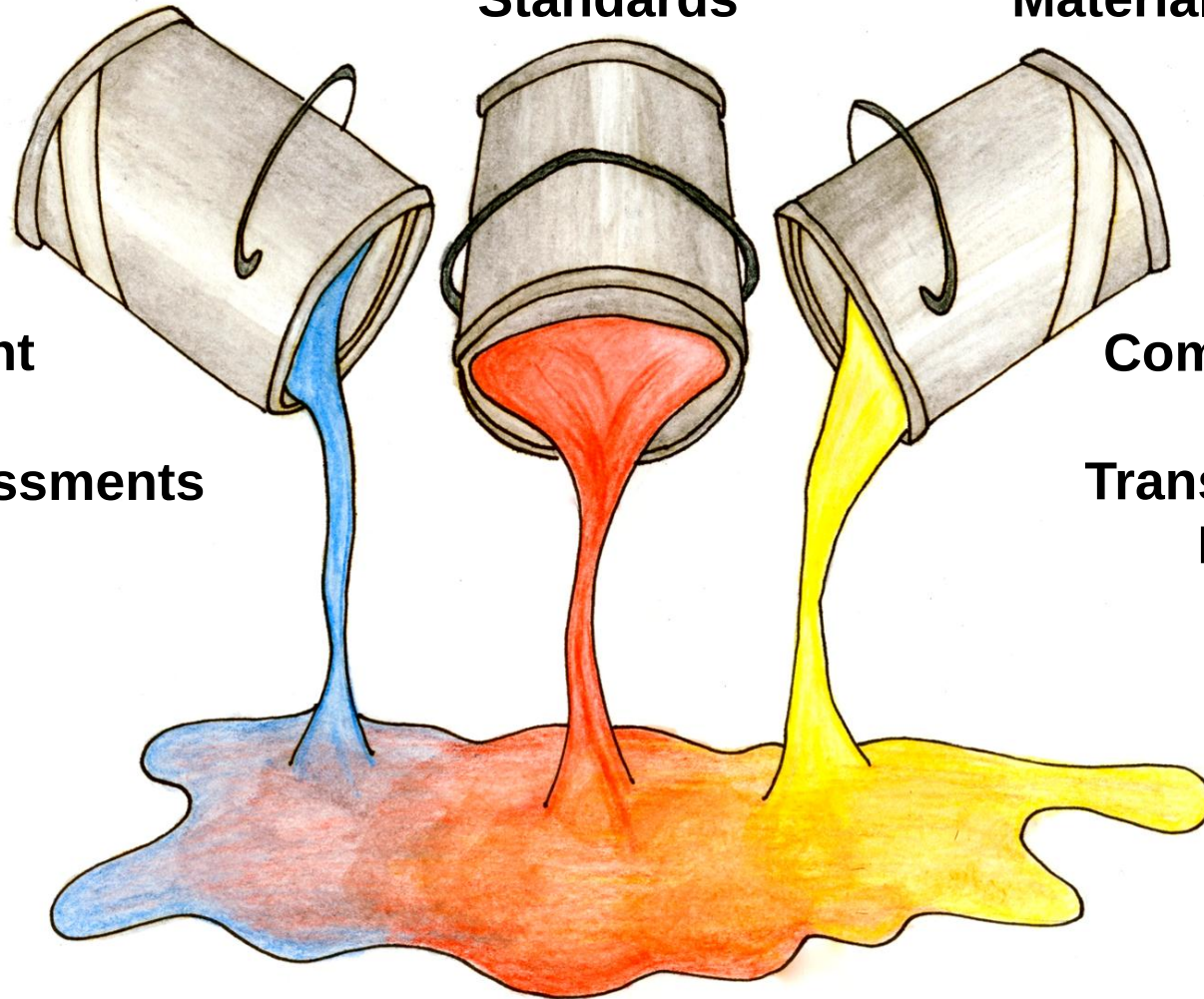
**Formative
Assessment**

**School
Improvement**

Communication

Assessments

**Transition
Plans**



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Policy Inc.

Implementing Common Core State Standards Workgroup

- Webinar Series
- Common Core State Standards
- Survey of SBAC states
- Focused presentations October, 2011 – June, 2012

the SMARTER Balanced Assessment
Consortium can be found online at

www.k12.wa.us/SMARTER