**Assessment and Accountability Network Meeting**  
**Thursday, January 26th  2011**

**Agenda**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Details</th>
</tr>
</thead>
</table>
| 9:00 am| Welcome, Introductions, Warm Up, and Meeting Outcomes | • Team Member Introduction Whip  
• Warm Up – “An Uncommon Common Core Standards” Activity  
• Review Meeting Outcomes  
  o SBAC Update and RAN Update  
  o Explore the topic of Classroom Grading and the Common Core Standards  
  o Participate in an Open Discussion About Common Topics of Interest  
  o Updates about key AAN Projects |
| 9:20 am| SBAC and RAN Updates                               | • Smarter Balanced Assessment Consortium  
• CDE Common Core Standards Systems Implementation Plan for California  
• AB – 250 – Reauthorization of Statewide Assessment System |
| 9:45 am| Open Discussion                                    | • Review Topics from Last Meeting and Modify  
• Purpose of Discussion  
• Discussion Norms  
• Facilitated Whole Group Discussion  
• Logistics for Ongoing Discussion of Key Topics |
| 10:30 am| Key AAN Projects                                  | • Update of the Online Progress Assessment Project  
• Benchmark Assessment Resource Tool  
• Assessment and Accountability Book Resources |
| 10:55 am| Meeting Evaluation                                 |                                                                                             |

Next meeting date: March 22nd, 2012
Meting Outcomes

- Participate in an Engagement Activity
- Discuss RAN Topics
- Explore the topic of Classroom Grading and the Common Core Standards
- Participate in an Open Discussion About Common Topics of Interest
- Update key AAN Projects
Engagement Activity Outcomes

• Understand the importance of the initial question in building an engagement activity aligned to the Common Core Standards.
• Practice using physical and technology-rich modeling systems to solve an engaging problem
• Build links to real world application
• Use Most Formative Assessment techniques
Occupy California
It Starts with the Standards

• 8.1EE Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used.

• Use appropriate tools strategically
Breaking Down the Standard into Learning Targets

• I can use a variety of tools to model exponential growth in both biological and physical systems
• I can use scientific notation to represent the exponential growth of very small and very large numbers.
Occupy California

Context: As an educator, you are fed up with the lack of financial support that the state of California provides for K-12 Education. You decide to occupy California!

Essential Question: How many iterations of Facebook communications will it take to ensure that there are enough people to totally occupy California with each person given a radius of 1 meters of space around them?
Occupy California (continued)

Protocol:

• You decide to communicate your desire to occupy California with a friend. (2)

• You and your friend will then communicate with an additional two friends to Occupy California. (4).

• If each person requires a radius of 1 meter in order to feel comfortable at the occupation, calculate how many iterations of Facebook communications would be required to completely cover California.

• Continue the communication iterations until you have enough people to occupy California. How many people will this involve and how long will it take if each communication iteration requires about 20 minutes?
What Do the Students Already Know?

| Student Name: __________________________ | Period: ____ | Teacher: __________________ | Date: ________ |

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use a variety of tools to model exponential growth in both biological and physical systems.

- I can describe the meaning of exponential growth:
- I can give examples of exponential growth:
- I can tell why exponential growth is important in the real world:

I met this target                      I need more practice                      I need help from my teacher
# Did the Students Learn?

<table>
<thead>
<tr>
<th>Student Name: ______________________________</th>
<th>Period: ____</th>
<th>Teacher: __________________</th>
<th>Date: __________</th>
</tr>
</thead>
</table>

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use a variety of tools to model exponential growth in both biological and physical systems.

- I can describe the meaning of exponential growth:
- I can give examples of exponential growth:
- I can tell why exponential growth is important in the real world:

I met this target

I need more practice

I need help from my teacher
### Modeling Growth Using Excel

**Problem:** How many Facebook iterations will it take to occupy California with Friends of Education?

**Area of California = 423,970 sq km**

<table>
<thead>
<tr>
<th>Iterations</th>
<th>Time (Minutes)</th>
<th>Time (Hours)</th>
<th>Number of People</th>
<th>Personal Space (Meter²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>0.33</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>0.67</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>1.00</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>1.33</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
<td>1.67</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>120</td>
<td>2.00</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>7</td>
<td>140</td>
<td>2.33</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>8</td>
<td>160</td>
<td>2.67</td>
<td>256</td>
<td>256</td>
</tr>
<tr>
<td>9</td>
<td>180</td>
<td>3.00</td>
<td>512</td>
<td>512</td>
</tr>
<tr>
<td>10</td>
<td>200</td>
<td>3.33</td>
<td>1,024</td>
<td>1,024</td>
</tr>
<tr>
<td>11</td>
<td>220</td>
<td>3.67</td>
<td>2,048</td>
<td>2,048</td>
</tr>
<tr>
<td>12</td>
<td>240</td>
<td>4.00</td>
<td>4,096</td>
<td>4,096</td>
</tr>
<tr>
<td>13</td>
<td>260</td>
<td>4.33</td>
<td>8,192</td>
<td>8,192</td>
</tr>
<tr>
<td>14</td>
<td>280</td>
<td>4.67</td>
<td>16,384</td>
<td>16,384</td>
</tr>
<tr>
<td>15</td>
<td>300</td>
<td>5.00</td>
<td>32,768</td>
<td>32,768</td>
</tr>
<tr>
<td>16</td>
<td>320</td>
<td>5.33</td>
<td>65,536</td>
<td>65,536</td>
</tr>
<tr>
<td>17</td>
<td>340</td>
<td>5.67</td>
<td>131,072</td>
<td>131,072</td>
</tr>
<tr>
<td>18</td>
<td>360</td>
<td>6.00</td>
<td>262,144</td>
<td>262,144</td>
</tr>
<tr>
<td>19</td>
<td>380</td>
<td>6.33</td>
<td>524,288</td>
<td>524,288</td>
</tr>
<tr>
<td>20</td>
<td>400</td>
<td>6.67</td>
<td>1,048,576</td>
<td>1,048,576</td>
</tr>
<tr>
<td>21</td>
<td>420</td>
<td>7.00</td>
<td>2,097,152</td>
<td>2,097,152</td>
</tr>
<tr>
<td>22</td>
<td>440</td>
<td>7.33</td>
<td>4,194,304</td>
<td>4,194,304</td>
</tr>
<tr>
<td>23</td>
<td>460</td>
<td>7.67</td>
<td>8,388,608</td>
<td>8,388,608</td>
</tr>
<tr>
<td>24</td>
<td>480</td>
<td>8.00</td>
<td>16,777,216</td>
<td>16,777,216</td>
</tr>
<tr>
<td>25</td>
<td>500</td>
<td>8.33</td>
<td>33,554,432</td>
<td>33,554,432</td>
</tr>
<tr>
<td>27</td>
<td>540</td>
<td>9.00</td>
<td>134,217,728</td>
<td>134,217,728</td>
</tr>
<tr>
<td>28</td>
<td>560</td>
<td>9.33</td>
<td>268,435,456</td>
<td>268,435,456</td>
</tr>
</tbody>
</table>

**Answer:**

- Time = 13 hours
- Iterations = 40
- Number of People = 549,755,813,888 = 5.50 \times 10^{11}
Exponential Growth
Classroom Activity

Bill Conrad
Jimmy Scherrer

December 6th, 2011
# Growing Bacteria as Big as the Earth

## Growing Exponentially

<table>
<thead>
<tr>
<th>Generative Question or Problem: How long will it take for a bacterial colony to grow as big as the earth?</th>
<th>Key Science Concepts: Exponential Growth, Scientific Notation</th>
<th>Technology Resources/Connections: Exponential Growth Excel Modeling Tool, Exponential Growth Wikipedia, <a href="http://en.wikipedia.org/wiki/Exponential_growth#Basic_formula">http://en.wikipedia.org/wiki/Exponential_growth#Basic_formula</a>, The King’s Chessboard by David Birch and Devra Grebu, <a href="http://www.raft.net/main">http://www.raft.net/main</a>, Powers of Ten Video (Introduce students to the ideas of large and small numbers), <a href="http://www.youtube.com/watch?v=0KBlvDjuy0">http://www.youtube.com/watch?v=0KBlvDjuy0</a>, Relative Size of Bacteria, <a href="http://learn.genetics.utah.edu/content/begin/cells/scale/">http://learn.genetics.utah.edu/content/begin/cells/scale/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Student Misconception(s): This lesson will challenge student’s conventional thinking about the change process. Things are not always what they appear to be. Most students will think that it will take years for one small bacterium to divide enough to weigh as much as the earth.</td>
<td>Common Core Standards: Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.</td>
<td>21st Century Science Skill Focus: Many natural phenomena defy common sense and must be understood and analyzed in ways that reveal their true properties and not their perceived properties. It will be a 21st century skills for students to use a modeling approach to study the growth of a population using a variety of analytical and technology tools to reveal surprises that occur in systems that grow exponentially. Students will proceed from using concrete manipulatives to Excel to model the exponential growth of a bacterial colony. Students will be challenged to discover other natural systems that display exponential growth such as the buildup of carbon dioxide in the atmosphere that contributes to global warming.</td>
</tr>
</tbody>
</table>
Regional Assessment Network Update

Bill Conrad

January 26th, 2011
SBAC Assessment Update Outcomes

• Review the RAN Meeting Notes
• Vote on the Topics to Review in Depth
• Team Review of Selected Topics
• Whole Group Discussion of Topics
REGIONAL ASSESSMENT NETWORK NOTES
Wednesday, January 18, 2012

Assessment Development & Administration Division (Kristen Brown, Diane Hernandez)

In October, AAD split, creating Assessment as one branch and Accountability as another. Rachel Perry is still in charge of Accountability.
- Diane Hernandez is the newly named Interim Director of Assessment. Moving forward, the position is posted until filled. (http://www.cde.ca.gov/re/di/or/ada.asp)
- Kristen Brown is the newly named Smarter Balanced Coordinator for CDE.

FYI: CDE SBAC reps are starting to meet with CA CISC and the Technology group.

CALPADS (Karic Ashley)  Handout #1

**Education Data News – Newsletter went out 1/17/2012.** (See page 3, Matrix of Major CDE Data Collections.)
http://www.cde.ca.gov/ds/sp/d/wtrnws1tr12.asp

Governor’s State of the State: Will discuss school funding, particularly a per pupil funding formula. Department of Finance asked CDE for data out of CALPADS to do projections - # of EL, SES, Total enrollment, etc. This is one more reminder to keep CALPADS data current and reliable. Some funding is based on it – Title III and EIA based on EL counts. Basic enrollment data is also used in EIA.

**English Learner Data** – historically inconsistent data relative to how ELs are identified, reclassified, what happens when they move school to school or district to district. CALPADS is bringing those issues to the forefront.
RAN Topic Selection
Discussion of the RAN topic

• Why is this RAN Topic important for our Districts to Address?
• What new information does the RAN update provide about this topic?
• How can we work together to better support addressing the implementation or resolving issues related to this topic?
• How can the SCCOE team help support you with this topic?
• What additional support or information do you need?
How CAN SCCOE Help?

• SCCOE is working with Educational Data Systems and the Silicon Valley Math Initiative to build an online Performance Assessment Repository and Implementation tool for the MARS assessment tasks, rubrics, exemplars, error patterns, and re-engagement lessons.

• Collaboration to integrate high quality selected response and performance tasks into Common Core Standards aligned units that teacher teams will be building next year as a part of the Curriculum Leadership Council work.
Resources

Smarter Balanced Assessments Consortium Web Site
http://www.k12.wa.us/smarter/

Santa Clara County Office of Education Facebook
http://www.facebook.com/#!/SCCOECommonCore

CDE Common Core Web Site
http://www.cde.ca.gov/ci/cc

CDE on Twitter
http://twitter.com/#!/TorlaksonSSPI/

CDE on I-Tunes
http://www.cde.ca.gov/re/mm/it/
What are the Implications for Grading and Report Cards with the Implementation of the Common Core Standards?
Grading and Report Cards Activity

You will be assigned to a group to review one of the key areas. Please discuss the characteristics of this area with your team members. To what extent is your district currently in alignment with this key element? What implications does this key area have for your implementation of the Common Core Standards? What changes will need to occur in order to lead the implementation this area? What support will you need from our AAN team and the Santa Clara County Office of Education to implement a 21st Century Grading and Reporting System within your School District?
Discussion of the AAN topic

• Why is this AAN Topic important for our Districts to address?
• What new information does the AAN update provide about this topic?
• How can we work together to better support addressing the implementation or resolving issues related to this topic?
• How can the SCCOE team help support you with this topic?
• What additional support or information do you need?
Online Performance Assessment Project Update

- Pre-loaded MARS items that can be selected and built into assessments (one or more tasks per assessment). Based on Shannon's requests, we have three 4th Grade and two 9th grade tasks available.
- User can build answer documents with Pre-ID information (both human readable and barcode) pre-printed onto the document. They download this dynamic document as a PDF and print it themselves.
- Scan the completed answer sheets, which are identified and sorted into "queues" -- waiting to be scored. Multiple-choice is supported and will be scored automatically from the key, however, currently the tests with Shannon will focus on open-ended.
- The user goes to the "Scoring" section where they pick the task they wish to score and begin the online scoring process. They can score in "linear mode", where the user scores an entire task for one student at a time, or "horizontal mode" where they score one sub-task for all students, then move on to the next sub-task. Currently all feedback mechanisms are disabled. For this test, we are focused on capturing scores and will enhance with teacher-to-student/PLC feedback later. Links to PDF rubric and PDF sampled scored items are available for reference from the scoring screen.
- The system provides a very basic data export for downloading the score data.
Benchmark Assessment Resource Tool Update

The purpose of this Benchmark Assessment Resource is to provide the opportunity for our SCC District Assessment Teams to gain access to the variety of tools and resources that our Assessment and Accountability teams use in the development and use of Benchmark Assessments throughout our county.

Meeting Evaluation

http://www.surveymonkey.com/s/2FFR7NB
AAN Meeting

Assessment and Accountability Team

January 26th, 2012
**Assessment and Accountability Topics of Interest**

Assessment and Accountability Department – Santa Clara County Office of Education

January 26th, 2012

**Introduction:** At our last meeting in October we generated a list of questions that became opportunities for open discussion. I synthesized the questions into themes, sample questions, and current status in the table below. I hope that we can use these themes and questions for continued dialog at our meeting on January 26th. We will of course address other important questions and topics at our meeting that have emerged since our last meeting. For example, in my visits to your districts, many of you have expressed an interest in discussing how the new Common Core Standards initiative will influence classroom grading practices.

<table>
<thead>
<tr>
<th><strong>Sample Question(s) from the October Meeting</strong></th>
<th><strong>21st Century Assessments</strong></th>
<th><strong>Formative Assessments</strong></th>
<th><strong>Technology</strong></th>
<th><strong>College Readiness</strong></th>
<th><strong>Evaluation of District Initiatives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Our district is focusing on 21st Century Skills and developing measurements for the following: problem solving; critical thinking; communication: effectiveness etc. Do you know of any measurement tools/“assessments” for these areas/Rubrics? Etc</td>
<td>How do we move towards more formative assessments with our teachers?</td>
<td>How are others planning for the technology required for our future assessments?</td>
<td>How are districts using EAP data to inform students, parents, and programs? What is the scoring process for EAP? How is the writing section weighted? It’s a challenging test. What should we expect of student scores? This test is supposed to be a better indicator than A-G college readiness. What are the studies on this test? Is it predictive? How are districts using the data?</td>
<td>There are so many new interventions in place – how do we know what is truly working when there are multiple variables of treatment and no “clean”/untreated controls groups.</td>
<td></td>
</tr>
<tr>
<td>How do we develop quality formative assessment professional development for our school sites?</td>
<td></td>
<td>How do we transfer our entire assessment system (assessments, databases) to the way that CCSS will be assessed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Status</strong></td>
<td>We shared the Inside Mathematics Web site that describes examples of performance tasks that assess higher level thinking skills as a part of the MARS assessment system. <a href="http://insidemathematics.org/">http://insidemathematics.org/</a></td>
<td>Collaboration among our Districts and SCCOE to integrate high quality selected response and performance tasks into Common Core Standards aligned units that teacher teams will be building next year as a part of the Curriculum Leadership Council work.</td>
<td>SCCOE is working with Educational Data Systems and the Silicon Valley Math Initiative to build an online performance assessment repository and implementation tool for the MARS assessment tasks, rubrics, exemplars, error patterns, and re-engagement lessons</td>
<td>We discussed this theme at our last meeting but no action has been taken on it since the meeting. Additional information about EAP can be found on the CDE web site below: <a href="http://www.cde.ca.gov/ci/gs/ps/eapindex.asp">http://www.cde.ca.gov/ci/gs/ps/eapindex.asp</a></td>
<td></td>
</tr>
<tr>
<td>The Sim Scientist System developed by Edys Quelmalz from West Ed represents a system that assesses 21st century Skills in Science. <a href="http://simscientist.org/home/index.php">http://simscientist.org/home/index.php</a></td>
<td></td>
<td></td>
<td></td>
<td>Paul Tuss from the Sacramento SOC and Tom Barrett from Enterprise LLC presented a District-focused Evaluation Workshop at the CERA Conference in December. They would be willing to come to Santa Clara to present for a ½ day in the Spring</td>
<td></td>
</tr>
</tbody>
</table>
Through a partnership between the Assessment and Accountability Department and the Learning Multimedia Center, these timely resources are now available for check out.

<table>
<thead>
<tr>
<th>Book Title</th>
<th>Author(s)</th>
<th>Topic</th>
<th>Brief Book Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Formative Assessments: How to Construct Standards-based Instruction and Assessment (LB 3060.83 A37)</td>
<td>Larry Ainsworth and Donald Viegut</td>
<td>Assessment</td>
<td>Supports the alignment of curriculum, instruction, and assessment to the standards essential for student success. Provides a focus on helping teachers produce useful formative assessments.</td>
</tr>
<tr>
<td>Assessing Student Learning: From Grading to Understanding (LB 3051 A7664)</td>
<td>David Allen</td>
<td>Assessment</td>
<td>This resource provides a range of practical, replicable processes for collaboratively examining student work, including writing samples, visual work, portfolios and exhibitions.</td>
</tr>
<tr>
<td>Data Analysis for Continuous School Improvement (LB 1028.46 B47)</td>
<td>Victoria L. Bernhardt</td>
<td>Accountability</td>
<td>Shows how analysis of real school’s data leads to school improvement plans, and provides templates and examples for leaders to use in analyzing data in their own learning organizations.</td>
</tr>
<tr>
<td>The School Portfolio Toolkit (LB 2822.82 B48)</td>
<td>Victoria L. Bernhardt</td>
<td>Accountability</td>
<td>The School Portfolio Toolkit is a book and compact disc (CD) that includes over 300 tools, strategies, templates, and examples for use in building school portfolios and for planning, implementing, and evaluating continuous school improvement.</td>
</tr>
<tr>
<td>The ABCs of Evaluation: Timeless Techniques for Program and Project Managers (HD 31 B633)</td>
<td>John Boulmetis and Phyllis Dutwin</td>
<td>Evaluation</td>
<td>Offers an introduction to program evaluation. This is a comprehensive textbook that covers topics such as stakeholder relationships, program design, data collection and analysis, reporting results, and other important steps in the evaluation process.</td>
</tr>
<tr>
<td>Schools and Data: The Educator’s Guide for Using Data to Improve Decision Making (LB 2805 C737)</td>
<td>Theodore B. Creighton</td>
<td>Evaluation</td>
<td>Focuses on the relevance of statistics in the lives of principals and teachers. Provides real world examples with step-by-step procedures for collecting, organizing data to provide school leaders with the means to facilitate more appropriate and effective decision making.</td>
</tr>
<tr>
<td>Discovering Statistics Using SPSS (HA 32 F54)</td>
<td>Andy Field</td>
<td>Research and Evaluation</td>
<td>Walks students through the use the use of SPSS form a very basic to advanced while grounding the student knowledge through the use of SPSS.</td>
</tr>
<tr>
<td>Book Title</td>
<td>Author(s)</td>
<td>Topic</td>
<td>Brief Book Description</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Purposeful Program Theory: Effective Use of Theories of Change and Logic Models</em> (H 62 F855)</td>
<td>Sue C. Funnell and Patricia J. Rogers</td>
<td>Evaluation</td>
<td>This book is designed to help the reader assess his/her particular circumstances and develop, represent, and use program theory in appropriate ways.</td>
</tr>
<tr>
<td><em>Performance Evaluation: Proven Approaches for Improving Program and Organizational Performance</em> (HF 5549.5 G84)</td>
<td>Ingrid J. Guerra-Lopez</td>
<td>Evaluation</td>
<td>This is a hands-on text for practitioners, researchers, educators and students in how to use scientifically-based evaluations that are both rigorous and flexible.</td>
</tr>
<tr>
<td><em>Visible Learning: A Synthesis of over 800 Meta-Analyses</em> (LB 1060 H388)</td>
<td>John Hattie</td>
<td>Research</td>
<td>This book is the result of 15 years’ research and syntheses of over 800 meta-analyses relating to the influences on student achievement in school-aged students. It builds a story about the power of teachers and of feedback, and constructs a model of learning and understanding.</td>
</tr>
<tr>
<td><em>Science Formative Assessment: 75 Practical Strategies for Linking assessment, Instruction, and Learning</em> (Q 181 K247)</td>
<td>Paige Keeley</td>
<td>Assessment</td>
<td>Author shares 75 specific assessment techniques to help teachers in grades K-13 provide effective science instruction. Book provides flexible assessments that can be used with any science curriculum. Assessments also can be easily applied to other subject areas as well.</td>
</tr>
<tr>
<td><em>Evaluating Training Programs</em> (HF 5549.5 T7 K569)</td>
<td>Donald L. Kirkpatrick</td>
<td>Evaluation</td>
<td>Shares a four level model for evaluating programs.</td>
</tr>
<tr>
<td><em>Qualitative Research: An Introduction to Methods and Design</em> (H 62 L293)</td>
<td>Stephen D. Lapan, Marylynn Quartaroli, and Frances Riemer</td>
<td>Research</td>
<td>Book describes and explains a broad spectrum of research approaches, ranging from such recognizable investigative areas such as historical and ethnographic research to emerging methodologies including autoethnography and arts-base research.</td>
</tr>
<tr>
<td><em>Classroom Assessment and Grading that Works</em> (LB 3051 M4573)</td>
<td>Robert J. Marzano</td>
<td>Assessment</td>
<td>Provides an in-depth exploration of effective standard-based formative assessment that dramatically improves student achievement.</td>
</tr>
<tr>
<td><em>Designing and Teaching Learning Goals and Objectives</em> (LB 17 M394)</td>
<td>Robert J. Marzano</td>
<td>Instruction</td>
<td>Translates the strongest research on goal setting into focused applications in the classroom.</td>
</tr>
<tr>
<td>Book Title</td>
<td>Author(s)</td>
<td>Topic</td>
<td>Brief Book Description</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement (LB 1025.3 M339)</td>
<td>Robert J. Marzano, Debra J. Pickering, and Jane E. Pollock</td>
<td>Instruction</td>
<td>The book describes 9 research–based instructional strategies that educators can use that improve the opportunities for students to learn.</td>
</tr>
<tr>
<td>Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods (LB 1028 M3964)</td>
<td>Donna M. Mertens</td>
<td>Evaluation</td>
<td>This book explains quantitative, qualitative, and mixed methods in detail, incorporating the viewpoints of various research paradigms into the descriptions of these methods.</td>
</tr>
<tr>
<td>Results Now: How We Can Achieve Unprecedented Improvements in Teaching and Learning (LB 2822.82 S356)</td>
<td>Mike Schmoker</td>
<td>Leadership</td>
<td>This book describes change practices that result in the improvement of schools focusing on instruction.</td>
</tr>
<tr>
<td>Classroom Assessment for Student Learning: Doing it Right – Using it Well (LB 3051 C53)</td>
<td>Rick Stiggins, Judith Arter, Jan Chappuis, Steve Chappuis</td>
<td>Assessment</td>
<td>This book is the core of a larger, comprehensive professional development program to support teacher understanding and use of formative assessments.</td>
</tr>
<tr>
<td>Quantitative Data Analysis: Doing Social Research to Test Ideas (HA 29 T675)</td>
<td>Donald J. Treiman</td>
<td>Research and Evaluation</td>
<td>This is a book about how to conduct theoretically informed quantitative social research – that is, social research to test ideas.</td>
</tr>
</tbody>
</table>
| Change Leadership: A Practical Guide to Transforming our Schools (LB 2805 W315)  | Tony Wagner and Robert Kegan | Leadership    | This book suggests that there is a necessary progression to the work of system improvement:  
  - Preparing for change by answering the question “Why Change?”
  - Including others and building the system’s capacity for improvement.
  - Improving Instruction                                                                                                                                                                                                                                   |
| Handbook of Practical Program Evaluation (H 97 H358)  | Joseph S. Wholey, Harry P. Hatry, and Kathryn E. Newcomer | Evaluation    | This handbook seeks to make the practice of program evaluation accessible and practical as possible.                                                                                                                                                                         |
## Growing Exponentially

<table>
<thead>
<tr>
<th>Generative Question or Problem:</th>
<th>Key Science Concepts:</th>
</tr>
</thead>
</table>
| How long will it take for a bacterial colony to grow as big as the earth? | • Exponential Growth  
• Scientific Notation |

<table>
<thead>
<tr>
<th>Lesson Targets:</th>
<th>Technology Resources/Connections:</th>
</tr>
</thead>
</table>
| Use a variety of tools to model exponential growth in both biological and physical systems. | • Exponential Growth Excel Modeling Tool  
• Exponential Growth Wikipedia:  
• *The King’s Chessboard* by David Birch and Devis Grebu  
  • The Raft Store: [http://www.raft.net/main](http://www.raft.net/main)  
• Powers of Ten Video (Introduce students to the ideas of large and small numbers).  
  - [http://www.youtube.com/watch?v=0fKBhvDjuy0](http://www.youtube.com/watch?v=0fKBhvDjuy0)  
• Relative Size of Bacteria  
  - [http://learn.genetics.utah.edu/content/begin/cells(scale)](http://learn.genetics.utah.edu/content/begin/cells(scale)) |

<table>
<thead>
<tr>
<th>Potential Student Misconception(s):</th>
<th>Common Core Standards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This lesson will challenge student’s conventional thinking about the change process. Things are not always what they appear to be. Most students will think that it will take years for one small bacterium to divide enough to weigh as much as the earth.</td>
<td>Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21st Century Science Skill Focus:</th>
<th></th>
</tr>
</thead>
</table>
| Many natural phenomena defy common sense and must be understood and analyzed in ways that reveal their true properties and not their perceived properties. It will be a 21st century skills for students to use a modeling approach to study the growth of a population using a variety of analytical and technology tools to reveal surprises that occur in systems that grow exponentially.  
Students will proceed from using concrete manipulatives to Excel to model the exponential growth of a bacterial colony. Students will be challenged to discover other natural systems that display exponential growth such as the buildup of carbon dioxide in the atmosphere that contributes to global warming. |  |
**Key Academic Vocabulary:**

**Exponential Growth:**
Growth of a system in which the amount being added to the system is proportional to the amount already present: the bigger the system is, the greater the increase. In everyday speech, exponential growth means runaway expansion, such as in population growth. (Source: *American Heritage Dictionary*)

**Scientific Notation:**
A method of writing or displaying numbers in terms of a decimal number between 1 and 10 multiplied by a power of 10. The scientific notation of 10,492, for example, is $1.0492 \times 10^4$. (Source: *American Heritage Dictionary*)

---

**Detailed Instructional Activities**

**5 E Elements:** Engage, Explore, Explain, Elaborate, Evaluate (please clearly indicate where in lessons you are using 5E elements)

**Engage:**
The lesson will begin by reading the short story, the *King’s Chessboard* by David Birch and Devis Grebu to students. There will be a brief whole group discussion of the following questions:

- What are some characteristics of the growth of the rice system within this story?
- Can you identify other systems that demonstrate this kind of growth?
- How does this story reflect the saying: “Things are not always what they seem to be?”

**Explore:**
Clearly identify the Learning Targets for the lesson:

- Understand the idea of exponential growth.
- Use a variety of tools to model exponential growth in both biological and physical systems
- Use scientific notation to represent the exponential growth of very small and very large numbers
- Apply the idea of exponential growth to other natural biological and physical systems

Introduce the English Language objective for the lesson along with the sentence frames that students will use to better understand the academic vocabulary used in this lesson. The sentence frames that will help support both EL and non-EL students better understand the vocabulary of exponential growth and scientific notation can be found at the end of this lesson.

The first formative assessment will be administered at this time. Students will have an opportunity to share their knowledge and understanding of the key outcomes for this lesson. This initial formative assessment will also be used as an exit ticket at the end of the lesson to gauge how much students have learned about the key ideas of exponential growth and scientific notation.

Students will be introduced to the challenge problem: **How long will it take for a bacterial colony to grow as big as the earth?**

- Students will be introduced to the size of a bacteria and the size of the earth.
  - Bacteria mass = $6.6 \times 10^{-15}$ Kilograms = $0.00000000000666$ Kilograms
    - Most bacteria are only a few micrometers (millionths of a meter) long.
  - Earth mass = $6.0 \times 10^{24}$ Kilograms = $6,000,000,000,000,000,000,000$ Kilograms
• Students will work in teams of two to begin a modeling process to better understand the doubling process involved in the growth of a bacterial colony. Team members will use a small ring to represent a bacterium. They will put this ring on a pipe cleaner. They will then use another pipe cleaner to represent a doubling (two rings on pipe cleaner). They will then double this amount and add 4 rings to a third pipe cleaner. The teams will continue this process and record their results on a Bacteria Ring Simulator Worksheet.

• When teams of two run out of resource, they will combine into teams of 4 and so on to combine resources to build out the growth model.

• Eventually the whole class will collaborate to build out a grand model that will be taped to the white board at the front of the room.

• There will be a brief discussion about the characteristics students observe emerging within this growth pattern.

• Students will be asked to predict how many more divisions it will take for the model to exceed the mass of the earth!

**Explain:**

- Eventually, there will not be enough ring resources to continue the division process. So it will be time to share with students how this process can be modeled using Excel. Students will go to the computer lab and use an Excel Template to continue working in teams to model the division and growing process.
- Additionally, students will have problems representing both the number of bacteria as well as the weight of the bacteria using regular numbers. The teacher will define scientific notation and help students use the sentence frames to build their own examples.
- The teacher will use the formative assessment of whiteboards to gauge the degree to which students can represent numbers using scientific notation.

**Elaborate:**

- After students have used the Excel Model to identify how many divisions an and how long it will take for the bacteria to divide such that their overall weight is equal to that of the mass of the earth, students will learn how to graph the variables of this model in order to identify key characteristics of exponential growth such as:
  - Exponential growth starts slowly but at a certain point rapidly increases.
  - Exponential growth is best represented by a rapidly increasing curve rather than a straight line.
  - Exponential growth cannot be sustained after a certain point.
- Students will be challenged to investigate the increase of CO₂ in the atmosphere. This increase contributes to global warming. Students will be challenged to find out if this increase is an exponential growth or a linear growth. Students will also be challenged to find additional examples of exponential growth in Biology, physics, geology, and finance.
- The teacher will also share the equation that can be used to calculate exponential growth at the end of the lesson. Students will be challenged to use this equation by manipulating the key variables that are key parts of exponential growth.

**Evaluate:**

- There will not be a summative evaluation for this lesson. Instead, students will complete an exit ticket that is exactly the same as the initial formative assessment used at the beginning of this lesson. This information will be used by the teacher to gauge the degree to which all of the students achieved the learning targets for the lesson.
Lesson Differentiation Strategies (EL/ELA):

- This lesson will focus on an English Language Objective of helping EL students better understand the academic vocabulary of Exponential growth and scientific notation. The teacher will use sentence frames to help students better understand and apply these concepts to real world situations.
- The use of physical manipulatives in the forms of rings and pipe cleaners will help students better understand the concepts of exponential growth.
- There will be frequent formative assessments during this lesson that the teacher will be able to use to provide differentiated support for all students but especially the EL students in the class.
<table>
<thead>
<tr>
<th>CONTENT KNOWLEDGE</th>
<th>PROCESS SKILLS (Investigation &amp;Experimentation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FORMATIVE ASSESSMENT</strong> (include rubrics/scoring guides where appropriate)</td>
<td>o Sentence frames will be used to engage students in using the application of the concepts of exponential growth and scientific notation.</td>
</tr>
<tr>
<td></td>
<td>o There will be an initial formative assessment at the beginning of class to measure student understanding of the processes involved in calculating exponential growth using scientific notation.</td>
</tr>
<tr>
<td></td>
<td>o White boards will be used to gauge student understanding of the concept of scientific notation.</td>
</tr>
<tr>
<td></td>
<td>o An exit ticket will be used at the end of class to gauge student understanding of the key concepts.</td>
</tr>
<tr>
<td>o Sentence frames will be used to engage students in using the key ideas of exponential growth and scientific notation.</td>
<td>o Students will submit their excel spreadsheets to gauge the degree to which they can apply the ideas of exponential growth and scientific notation.</td>
</tr>
<tr>
<td>o There will be an initial formative assessment at the beginning of class to measure student understanding of the key concepts of exponential growth and scientific notation.</td>
<td>o There will be an initial formative assessment at the beginning of class to measure student understanding of the processes involved in calculating exponential growth using scientific notation.</td>
</tr>
<tr>
<td>o White boards will be used to gauge student understanding of the concept of scientific notation.</td>
<td>o An exit ticket will be used at the end of class to gauge student understanding of the application of exponential growth to real world problems.</td>
</tr>
</tbody>
</table>

| SUMMATIVE ASSESSMENT (include rubrics/scoring guides where appropriate) | There will not be a summative assessment that will be a part of this lesson. | There will not be a summative assessment that will be a part of this lesson. |
### Websites and other Resources needed for the lesson (please include electronically)

- Exponential Growth Excel Modeling Tool is attached with this lesson
- Exponential Growth Wikipedia:
- *The King’s Chessboard* by David Birch and Devis Grebu (Available at [http://amazon.com](http://amazon.com))
- The Raft Store: [http://www.raft.net/main](http://www.raft.net/main) (Source of manipulatives used to model exponential growth)
- Powers of Ten Video (Introduce students to the ideas of large and small numbers). [http://www.youtube.com/watch?v=0fKBhvDjuy0](http://www.youtube.com/watch?v=0fKBhvDjuy0)
- Relative Size of Bacteria
  - [http://learn.genetics.utah.edu/content/begin/cells/scale/](http://learn.genetics.utah.edu/content/begin/cells/scale/)

### Micrometer

A unit of length equal to one thousandth (10^-3) of a millimeter or one millionth (10^-6) of a meter.

### Nanometer

One billionth (10^-9) of a meter.

### Picometer

One-trillionth (10^-12) of a meter.

*Please be sure to include all materials, laboratories, handouts and resources needed for this lesson electronically.*
**Academic Vocabulary**

**Sentence Frames**

**Directions:** There are two key academic vocabulary words that are a part of this lesson, exponential growth and scientific notation. Definitions from the American Heritage dictionary for these two important terms can be found below.

**Exponential Growth:**
Exponential Growth is the growth of a system in which the amount being added to the system is proportional to the amount already present: the bigger the system is the greater the increase. In everyday speech, exponential growth means runaway expansion, such as in population growth.

**Scientific Notation:**
Scientific notation is a method of writing or displaying numbers in terms of a decimal number between 1 and 10 multiplied by a power of 10. The scientific notation of 10,492, for example, is $1.0492 \times 10^4$. (Source: *American Heritage Dictionary*). Use the following sentence frames with students to help them use this vocabulary in ways that will help them better understand the concepts and to use them to solve the real world problems that are key part of this lesson.

**Exponential Growth Sentence Frames:**

When I double the number of rings on the pipe cleaner, I will increase the number of rings from _______ rings to ________ rings.

When I triple the number of rings on pipe cleaners, I will increase the number of rings from _______ rings to _________ rings.

If the number of bacteria in a colony is 64 and I double the colony, then the new size of the colony will be _______ bacteria.

If the number of bacteria in a colony is 64 and I double the colony, then the new size of the colony will be _______ bacteria.

**Scientific Notation**

The number 100 can be written in scientific notation as ____________.

The number 0.0001 can be written in scientific notation as ____________.

The number $2.0 \times 10^5$ can be written as _________________.

The number $3.0 \times 10^{-4}$ can be written as ________________.
Initial Formative Assessment
Exponential Growth and Scientific Notation

Student Name: __________________________ Period: _____ Teacher: __________________ Date: __________

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use a variety of tools to model exponential growth in both biological and physical systems.

I can describe the meaning of exponential growth: __________________________

I can give examples of exponential growth: __________________________

I met this target: [ ] I need more practice: [ ] I need help from my teacher: [ ]

Student Name: __________________________ Period: _____ Teacher: __________________ Date: __________

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use scientific notation to represent the exponential growth of very small and very large numbers.

I can describe the meaning of scientific notation: __________________________

I can give examples of scientific notation: __________________________

I met this target: [ ] I need more practice: [ ] I need help from my teacher: [ ]
## Exit Ticket Assessment

### Exponential Growth and Scientific Notation

**Student Name:** ___________________________  **Period:** ____  **Teacher:** _________________  **Date:** ____________

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use a variety of tools to model exponential growth in both biological and physical systems.

<table>
<thead>
<tr>
<th>I met these targets</th>
<th>I need more practice</th>
<th>I need help from my teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I can describe the meaning of exponential growth:

I can give examples of exponential growth:

**Student Name:** ___________________________  **Period:** ____  **Teacher:** _________________  **Date:** ____________

**Standard:** Ability to understand and model the exponential growth of both biological and physical systems using scientific notation and technology.

**Learning Target:** I can use scientific notation to represent the exponential growth of very small and very large numbers.

<table>
<thead>
<tr>
<th>I met this target</th>
<th>I need more practice</th>
<th>I need help from my teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I can describe the meaning of scientific notation:

I can give examples of scientific notation:

Page 9
# Bacteria Ring Simulator Worksheet

**Team Members:** ________________________________________________________   **Date:** ______________________

**Directions:**
Team members should use this Worksheet to keep track of the number and weight of the bacteria that they are modeling using the Bactria Ring Modeling system. Remember, the weight of one bacteria = $666 \times 10^{-15}$ Kilograms = 0.000000000000666 Kilograms.

<table>
<thead>
<tr>
<th>Division Number</th>
<th>Rings</th>
<th>Number of Bacteria Modeled</th>
<th>Total Weight of Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Purpose: The purpose of this activity is to begin to address the implications for Grading and Report Cards that will come as a result of the implementation of the Common Core Standards in School Districts.

Directions: There are six key areas associated with grading and report cards that will need to substantially change in order to effectively support students in achieving the Common Core Standards. These key areas include: Covarying Dimensions for key topics; Scoring Scale Representing Student Progress on a Measurement Topic; Formative Assessments.; Establishing Final Scores and Grades; Technology Support; and Report Cards. This activity will introduce team members to these key areas through the work of Robert Marzano. Team members will reflect on their current grading systems and also envision how these systems must change to address the implementation of the Common Core State Standards.

You will be assigned to a group to review one of the key areas. Please discuss the characteristics of this area with your team members. To what extent is your district currently in alignment with this key element? What implications does this key area have for your implementation of the Common Core Standards? What changes will need to occur in order to lead the implementation this area? What support will you need from our AAN team and the Santa Clara County Office of Education to implement a 21st Century Grading and Reporting System within your School District?

Common Core Standards Aligned Grading Practices
**Covarying Dimensions for a Key Topic**

According to Marzano (p.20), covariance means that as the ability in one dimension increases, so does that ability in another. Covariance of dimensions is partly a function of instruction. The Common Core Standards develop in complexity across grade levels and as such demonstrate covariance. The current State Standards are not linked developmentally and thus do not demonstrate covariance. The table below demonstrates covarying dimensions for the Measurement Topic of Reading for Main Idea. (Pages 20-25 in Marzano)

<table>
<thead>
<tr>
<th>Stem</th>
<th>While reading grade-appropriate material, the student identifies and articulates the major patterns or ideas in the text such as:</th>
</tr>
</thead>
</table>
| **Grade 9 and 10 (Lower Division)** | - Complex causal relationships  
- Arguments with complex systems of support  
- Problems with complex solutions  
- Complex plots with multiple story lines |
| **Grade 8** | - Complex causal relationships  
- Basic arguments  
- Problems with complex solutions  
- Complex plots with multiple story lines |
| **Grade 7** | - Complex causal relationships  
- Basic arguments  
- Problems with complex solutions  
- Plots with single story lines |
| **Grade 6** | - Complex causal relationships  
- Basic arguments  
- Problems with basic solutions  
- Plots with single story lines |
| **Grade 5** | - Complex causal relationships  
- Complex chronologies  
- Problems with basic solutions  
- Plots with single story lines |
| **Grade 4** | - Basic cause and effect  
- Simple chronologies  
- Problems with basic solutions  
- Plots with single story lines |
| **Grade 4** | - Basic cause and effect  
- Simple chronologies  
- Problems with basic solutions  
- Plots with single story lines |
| **Grade 3** | - Basic cause and effect  
- Simple chronologies  
- Problems with basic solutions  
- Plots with single story lines |
| **Grade 2** | - Basic cause and effect  
- Plots with single story lines |
| **Grade 1** | - Plots with single story lines |
| **Kindergarten** | Not applicable |

Source: *Classroom Assessment and Grading that Work* by Robert Marzano
**Key Discussion Questions:**

To what extent is your district currently in alignment with this key element?

What implications does this key area have for your implementation of the Common Core Standards?

What changes will need to occur in order to **lead** the implementation in this area?

What support will you need from our AAN team and the Santa Clara County Office of Education to support you in this effort?
2. Scoring Scale Representing Student Progress

It is no longer acceptable to administer quizzes and tests on a variety of topics, tally the points, and then average the percentages to produce a letter grade. This system does not reflect the true abilities of students to demonstrate what they know and can do on key Common Core Standards. Instead we need a clear scale system that will identify the expected student performance at different well-defined levels. The scale below is developed on a theory that students will progress in their ability to demonstrate the knowledge of content and skills presented in class following a clear theory of action. We need a fairer and more intelligible system to assess student performance that is in alignment with the developmental nature of the Common Core Standards and the increasing emphasis on more complex thought and the application of that thought to solve real world problems outside the confines of simpler problems presented within class. (Pages 40-42 in Marzano)

<table>
<thead>
<tr>
<th>Topic Score on Scale</th>
<th>Description of Place on Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>In addition to a Score of 3.0 performance, in depth inferences and applications that go beyond what was taught.</td>
</tr>
<tr>
<td>3.5</td>
<td>In addition to a Score of 3.0 performance, partial success at inferences and applications that go beyond what was taught</td>
</tr>
<tr>
<td>3.0</td>
<td>No major errors or omissions regarding any of the information and/or processes (simple or complex) that were explicitly taught.</td>
</tr>
<tr>
<td>2.5</td>
<td>No major errors or omissions regarding simpler details and partial knowledge of the more complex ideas and processes.</td>
</tr>
<tr>
<td>2.0</td>
<td>No major errors or omissions regarding simpler details and processes but major errors or omissions regarding the more complex ideas and processes.</td>
</tr>
<tr>
<td>1.5</td>
<td>Partial knowledge of the simpler details and processes but major errors or omissions regarding more complex ideas and processes.</td>
</tr>
<tr>
<td>1.0</td>
<td>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</td>
</tr>
<tr>
<td>0.5</td>
<td>With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.</td>
</tr>
<tr>
<td>0.0</td>
<td>Even with help, no understanding or skill demonstrated</td>
</tr>
</tbody>
</table>

Source: Classroom Assessment and Grading that Work by Robert Marzano

Key Discussion Questions:

To what extent is your district currently in alignment with this key element?

What implications does this key area have for your implementation of the Common Core Standards?

What changes will need to occur in order to lead the implementation of this key element?

What support will you need from our AAN team and the Santa Clara County Office of Education?
3. Formative Assessments Aligned to Scale

Once a coherent and intelligible scale is developed, it becomes important to develop assessments that are in alignment with the scale and the Common Core Standards. The assessment below is an example of the way that an assessment can be scaffolded to elicit student performance along a continuum that is aligned with the performance dimensions defined within the scale. Which questions within this assessment align with the item types defined below? How might these types define a scale of student performance? (Pages 42-48 Marzano)

**Type I Items:** Items that address basic details and processes that are relatively easy for students.

**Type II Items:** Items that address more complex ideas and processes that are more difficult for students.

**Type III Items:** Items that go beyond what was taught in class.

**Sample Assessment:**

You are thinking of renting a car and have looked at the rates for four companies. Each company has set a daily rate and a certain amount of free mileage. However, once you’ve used up your free miles with each company, they charge per mile in addition to the daily rate.

<table>
<thead>
<tr>
<th></th>
<th>Red-Bird Rental</th>
<th>Easy Rental</th>
<th>Reliable Rental</th>
<th>M &amp; A Rental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily Rate</strong></td>
<td>$43.00</td>
<td>$27.50</td>
<td>$40.00</td>
<td>$35.25</td>
</tr>
<tr>
<td><strong>Free Mileage</strong></td>
<td>1,200</td>
<td>500</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td><strong>Cost per Mile</strong></td>
<td>$0.22/mile</td>
<td>$0.32/mile</td>
<td>$0.25/mile</td>
<td>$0.20/mile</td>
</tr>
</tbody>
</table>

**Section 1:**

1. Which company has the highest daily rate?
   Answer:

2. Which company has the most free mileage?
   Answer:

3. If each company had the same daily rate and the same amount of free mileage, which would be the cheapest?
   Answer:

4. If each company had the same amount of free mileage and the same cost per mile, which company would be the most expensive?
   Answer:

5. Once you’ve used up your free mileage, which company would cost the least amount of money to travel 100 miles in a single day?

**Section 2:**

6. If you travel 100 miles per day; which company is the least expensive for:
   
   - 5 days
   - 10 days
   - 15 days
   - 20 days

Create a table or graph that shows how expensive each company is for each of the four options above, and explain how you calculated your answer.
Section 3:

7. Each of the four companies could be considered the “best deal” under certain circumstances. For each company, describe the situation under which it would be the best selection. In your answer and explanation, use the daily rate, free mileage, and rate per mile after free mileage.

Source: Classroom Assessment and Grading that Work by Robert Marzano

Key Discussion Questions:

To what extent is your district currently in alignment with this key element?

What implications does this key area have for your implementation of the Common Core Standards?

What changes will need to occur in order to lead the implementation of this key element?

What support will you need from our AAN team and the Santa Clara County Office of Education?
4. Using Technology to Assign Fair Grades

Technology systems for grading will need to move beyond the traditional system of averaging grades to one that reflects the spirit and intention of the Common Core Standards to demonstrate a progression of student learning. Systems will need to use methods that provide opportunities for teachers to build a system of mounting evidence for student achievement that aligns with the scale systems previously described. The figure below describes a 21st Century grade book that creates a structure that allows a teacher to build mounting evidence in support of student achievement of key topic areas. (pages 100-104 in Marzano)

Key Discussion Questions:
To what extent is your district currently in alignment with this key element?
What implications does this key area have for your implementation of the Common Core Standards?
What changes will need to occur in order to lead the implementation in this area?
What support will you need from our AAN team and the Santa Clara County Office of Education?
5. Establishing Final Scores and Grades

The average score for a given measurement topic is not necessarily the best representation of a student’s true score at the end of a grading period. A mathematical modeling system called “the power law of learning” is a better system because it can provide a better estimate of student performance because it takes into account previous performance as well as the current performance. The figure below demonstrates how the Power law provides a better estimate of student actual performance than does an average score. (Pages 108-116 in Marzano)

![Figure 6.2: The Best-Fitting Score](image)

<table>
<thead>
<tr>
<th>Score</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed Score</td>
<td>0.50</td>
<td>1.50</td>
<td>2.00</td>
<td>3.00</td>
<td>3.50</td>
<td>n/a</td>
</tr>
<tr>
<td>Average Score</td>
<td>2.10</td>
<td>2.10</td>
<td>2.10</td>
<td>2.10</td>
<td>2.10</td>
<td>n/a</td>
</tr>
<tr>
<td>Estimated Power Law Score</td>
<td>0.49</td>
<td>1.64</td>
<td>2.00</td>
<td>2.68</td>
<td>3.65</td>
<td>n/a</td>
</tr>
<tr>
<td>Difference Between Observed Score and Average Score</td>
<td>1.60</td>
<td>0.60</td>
<td>0.10</td>
<td>0.90</td>
<td>1.40</td>
<td>4.60</td>
</tr>
<tr>
<td>Difference Between Observed Score and Estimated Power Law Score</td>
<td>0.01</td>
<td>0.14</td>
<td>0.00</td>
<td>0.32</td>
<td>0.15</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Key Discussion Questions:

To what extent is your district currently in alignment with this key element?

What implications does this key area have for your implementation of the Common Core Standards?

What changes will need to occur in order to lead the implementation this area?

What support will you need from our AAN team and the Santa Clara County Office of Education?
6. Standards-Based Report Cards

A single letter grade is less than an optimal way to report student progress. From a standards-based perspective isolated letter grades are extremely deficient because they cannot provide the level of detailed feedback necessary to enhance student learning. Changing the format of report cards has the potential of altering K-12 education in the United States in dramatic and unprecedented ways. Robert Marzano believes that the biggest changes will occur when overall grades are not the norm. However, given how entrenched the letter grade is in American society, a district might wish to begin with a report card that provides this cultural icon along with detailed information on measurement topics. (Pages 125-133 in Marzano)

Key Discussion Questions:

To what extent is your district currently in alignment with this key element?
What implications does this key area have for your implementation of the Common Core Standards?
What changes will need to occur in order to lead the implementation in this area?
What support will you need from our AAN team and the Santa Clara County Office of Education?
References

Assessment Development & Administration Division (Kristen Brown, Diane Hernandez)

In October, AAD split, creating Assessment as one branch and Accountability as another. Rachel Perry is still in charge of Accountability.
- Diane Hernandez is the newly named Interim Director of Assessment. Moving forward, the position is posted until filled. (http://www.cde.ca.gov/re/di/or/ada.asp)
- Kristen Brown is the newly named Smarter Balanced Coordinator for CDE.

FYI: CDE SBAC reps are starting to meet with CA CISC and the Technology group.

CALPADS (Keric Ashley) Handout #1


Governor’s State of the State: Will discuss school funding, particularly a per pupil funding formula. Department of Finance asked CDE for data out of CALPADS to do projections - # of EL, SES, Total enrollment, etc. This is one more reminder to keep CALPADS data current and reliable. Some funding is based on it – Title III and EIA based on EL counts. Basic enrollment data is also used in EIA.

English Learner Data – historically inconsistent data relative to how ELs are identified, reclassified, what happens when they move school to school or district to district. CALPADS is bringing those issues to the forefront.

EXAMPLE:
- Requirement for Home Language Survey. (Answer four questions to determine primary language.)
- If HL is other than English, then the student is given CELDT within 30 days of enrollment.
- Problem: When a student moves sites/districts, the chance of cumulative file traveling with student is low.
- CALPADS makes it possible (once the data is loaded) to instantaneously view student status; however, this won’t resolve issues like:
  - I have an EO student and he transfers to new school. The new school does HLS every year, and now the survey says HL is not English.

A letter went out to the field a month ago to redefine designations. Please review:
http://www.cde.ca.gov/ds/sp/cl/documents/elas121411.doc

Common Core (Tom Adams, Barbara Murchison) Handout #2

Barbara Murchison is the Common Core Integrated Action Team Facilitator. This team is an effort on Superintendent Tom Torlakson’s part to help CDE work in a cohesive fashion.
- CCSS Draft System Implementation Plan for CA was presented to SBE 1/12/2012.
  http://www.cde.ca.gov/be/ag/ag/yr12/documents/jan12item09a01.doc
- Big Idea: This is a system that needs to be implemented. Everything that’s in there is considered a priority. Seven Guiding Strategies have been imposed on the system in order to make it manageable.

- Review Suggestions and Opportunities for LEAs: pp. 27 – 34
  - Are you already part of the SBAC listserv? The Common Core listserv?
    - Join the SBAC electronic mailing list by sending a blank e-mail to subscribe-sbac@mlist.cde.ca.gov
    - Join the Common Core Resources by sending a “blank” message to join-commoncore@mlist.cde.ca.gov
  - To contact the team: CommonCoreTeam@cde.ca.gov

Instructional Quality Commission – Applications are out there and the deadline is January 25th.
Application: http://www.cde.ca.gov/be/cc/ab/documents/advapplication20111114.doc
Supplemental Questionnaire: http://www.cde.ca.gov/be/cc/ab/documents/sqiqc.doc
There are 12 openings: 6 must be teachers. Applicants should stress experience working with standards and curriculum. They are not expected to be fully versed in CCSS, but the applicant should understand them and their importance.

Next Important date: At the March SBE meeting, Commissioners will be appointed.

Upcoming – Math Framework Committee. 6-8 months later is ELA.

Math Framework – At the SBE meeting on 1/12/2012, the timeline and application were approved.

- The framework expresses implementation of CCSS Math standards.
  - SBE asked: What’s the focus of the framework? How will it resolve grade 8 mathematics/Algebra? What can the framework do to solve these issues?
  - Solutions will have to come from the field.

- Math focus groups will occur soon: San Bernardino, San Diego, San Mateo, CDE
  - Purpose is to ask the field: What works best for you? What kind of guidance do you want?
  - Everything comes back to the SBE in July
    - Guidance for Framework
    - Framework Committee members

Supplemental Instructional Materials Review (BRIDGE MATERIALS)

- CDE is still short on reviewers. CDE needs a total of 100 each subject area. Can you send a representative?

- Next Wed (1/25/2012): Publisher’s briefing. They’ll see the standards map, Category 2 materials. There are a number of standards that need to be met at each grade level.

- Intervention programs – CDE is not going to ask for supplementation because they are skills based programs. They will do an alignment study between ’97 standards met and closest matches to CCSS.

- November 2012: All approved and non-appeals programs move forward
  - January 2013 is the second wave.
  - February 2013 the final list will be posted. This is not an adoption.

SMATER Balanced (Kristen Brown)  Handout #2.5

- IT Readiness Tool – Anticipated in March 2012
- Interim assessments – Would incur costs. The question is who will bear those costs? Districts? State?
- Formative tools and processes would not incur a cost.

AB 250 Update (Diane Hernandez, John Boivin)  Handout #3

- AB 250 deals with “the reauthorization of the statewide pupil assessment system.” It modifies existing Ed Code relative to curriculum frameworks, PD, and assessment components.
- Requires future assessments to conform to ESEA
- Requires Superintendent/SBE/Stakeholders to recommend changes to assessment system and transition plan
- Requires SSPI recommendations in 16 specific areas (see pp. 2-3)
  - What’s not there?
    - CAHSEE + Alternative Means
    - Independent Evaluator
    - Use of test results for teacher evaluation

Santa Clara Repository of Benchmark and Performance Assessment Resources (Bill Conrad)

SEE LAST PAGE OF HANDBOUTS. Santa Clara has built an online repository of benchmarks so districts can share materials and support one another in improving existing benchmarks.

**Accountability (Jenny Singh) Handouts #4 and #5**

**Context of legislation:** Legislature passed SB 219 to address the concern that some districts transferred students out of traditional high schools to alternative education programs (AEPs) just prior to testing. This process seeks to hold traditional schools and districts accountable for students who transfer to AEPs by rolling back their test scores. **THIS RELATES ONLY TO API, AND NOT AYP.**
- CALPADS Exit Code T167 – Rollback of test scores will start here. (Affects about 7,000 students in the state.) (Handout #4)

**STARTING POINT:** Usually, to be included in API in traditional schools, first ask: Was the student continuously enrolled since the Census date? For students who transfer from traditional school to traditional school, the historic rules remain in place. (See HANDOUT #5, page 1, Definition of “Continuously Enrolled”)

**CHANGES:** See Handout #5, pp. 2-3 for the rollback of Assessment results and attribution of Dropouts to for API.

**Working with PI Schools (Christine Swenson) No Handout**

½ of Title I districts are PI LEAs = 443.  
The # of schools in some level of PI is approximately 3800.

**Primary method of support is offering systemic report to LEAs. RSDSS (County office: Regional System of District and School Support) is a key piece of support to PI schools.**
- When LEAs enter PI, they need to revise their LEA Plan.
- CDE has provided feedback regarding goals, articulated timelines, expected outcomes and measurements...
- Federal Program Monitoring – Risk factors include either one or both: Fiscal and/or Programmatic Issues (low accountability results)
  - Reviewers are looking for evidence that the plan is evaluated annually
    - Evidence could be as simple as a Board Agenda item and report on progress toward meeting goals.
  - Reviewers are also looking for evidence the plan is up-to-date.
    - Revision is optional, annual review is required.

**ESEA Flexibility (Waiver): CA would end up with about 350 Priority schools and 600 Focus Schools**
- Priority schools’ intervention is SIG-like, but SEA can define that with more detail.
- How do we pay for this on a compressed timeline?
- What happens if the state applies for a waiver, and then ESEA is reauthorized, and there’s not absolute alignment on the components?

**CAHSEE/CHSPE/GED/PFT (Linda Hooper, Deb Probst, Denise Moore) Handouts #6, 7, and 8**

Denise Moore – GED Program

1) **New assessment in 2014-15: Offered on a Computer-based Test Format (NOT adaptive)**
   a. GED Testing Service is THE national oversight committee. Working on test to align with CCSS and assure career and college readiness.
   b. Will require test taker to have basic computer skills. It will be harder than it is now, based on the standards.
      i. Literacy
      ii. Math
      iii. Science
      iv. Social Studies
2) Computer-Based Testing Project strives to create comprehensive GED program prepare adults for career or post-secondary education
   a. Two phase roll-out
   b. Phase II: CA volunteered to be part of first group of states
      i. 20 testing centers are piloting computer-based testing (Pearson View)
      ii. Questions about transition – the state is looking at a gradual transition so that the 20 centers can offer computer-testing while others offer paper-pencil
   - In 2014-15, all that states can offer is computer-based testing
   - Historical records will be archived with Pearson View/GED Testing Service

Deb Probst — CAHSEE
   - Developing Alternative Means for SWD
   - Met with Advisory Commission on Special Education (ACSE) on January 5th
     o Recommend extending deadline from July 2012 to January 2013
       ▪ Advised to implement Tier I and not to implement Tier II
     o The group will recommend to SBE to amend regulations. If no change is made by June 30, then the exemption ends.
     o Info will go out to the field soon.
     o CDE has determined that scale scores could be used on CMA ELA grade 10 and Algebra I. Results will go to SBE in March.
     o SSPI will sponsor legislation to extend implementation possibly to coincide with implementation of CCSS implementation dates

Linda Hooper - PFT
   - You need to submit PFT data by June 30th to be able to take advantage of July 5 preliminary data file availability
   - Correction window opens July 5 and remains open during summer through September 4
   - October 2012 Data Release
   - NEW Excel VO2Max calculator is in review and will be posted soon
   - STAR Pre-ID and FITNESSGRAM Template Generator (See page 2)

STAR (John Boivin) NO HANDOUT

Don Killmer
   - 4 items to go to SBE in March
     o STS Standard Setting - Approval to go out for public comment (middle and high school grades, EOC Algebra and Geometry
     o CMA – PLDs presented for adoption (HS, Phase II grades 10-11 ELA and Geometry)
     o Apportionment
     o Generalized AB 250 update item – Reauthorization of STAR
   - IN 2012: Security Audits are Back!!
     o These will occur before, during and after testing at district as well as site level
     o Randomly selected
     o Plan is in approval stages at the department
       ▪ ETS proposes 200 (over STAR cycle – inclusive of writing administrations)
     o Mark discrimination analyses has returned too
       ▪ It’s the automated process that reviews the optically scanned answer documents to determine if there are irregularities

Mark McLean
   - Highlights from STAR Workshops
     o Writing tests are coming quickly – The writing tests are not optional
Writing test change for accommodations
- Students’ additional testing time is limited to completion within one day
- Prompts and passages may be read aloud
- Multiple choice test – new CDS code for district – home hospital or independent study

Reminders about administration
- Tell examiners to follow the DFA’s closely (for standardization and to avoid skipping sections)
- Check IEP’s and ensure they’re giving the right tests to the students
- For EOC math and science, mark the bubble for which math or science test the student takes (and avoid incurring rescoring costs)
- Students who are not testing may not stay in the classroom where other students are testing
  - Parent exemption
  - If there’s a 10th/11th grade science class and 10th grade life science test is administered, the 11th grade students should not be in the classroom. This is a breach of test security.
- CST Rulers are for 2nd grade students only. The label is on the packaging this year.

English Language Proficiency Assessments (ELPA)  (Lily Roberts, Tavi Popp)
- EDS Won the CELDT contract
- Two bills passed: AB 124 and SB 753
  - AB 124 – ELD standards development: Email went out 1/11/2012 about focus groups to occur in February. February 23rd in San Diego.
    - Applications for focus group membership
      - Contact person: Erin Koepke
    - There is an Implementation plan due to the Governor – how will these standards be included in CA standards and in ELPA?
      - Governor’s Budget Proposal included $0 for this work
  - SB 753 – Banking test scores and move test for annual assessment at point in time when 55% of instruction is complete.
    - ED rejected banking scores
    - Changing test window: Reporting results would be in February and AMAOs would be reported in July
    - ED was non-committal about moving it. They wanted more information about accountability compliance.
- SB 873 – On hold
- CELDT Regs were pulled b/c of technical issues relative to HLS and ASL

CELDT TOT Email went out today: Tentative Schedule
- OC – Santa Ana on April 18th
New Item Type: Speaking to produce more language, but has to be scorable in a rubric people can agree with and that is workable
  - These items have been pilot tested and they’re now field testing

Data Review Module with be February 13 through March 9th
CELDT 201B: Once you have the data, how do you use it?
- 201A is about Data Management.

English-Only Study
- Reinforces commitment to separating K and 1 testing

Report to Legislature on how K-1 Reading and Writing testing went
- Since LEA staff do have an opinion, a survey is being conducted
  - As of today, 890+ people have responded
Assessment Development & Administration Division (Kristen Brown, Diane Hernandez)

In October, AAD split, creating Assessment as one branch and Accountability as another. Rachel Perry is still in charge of Accountability.

- Diane Hernandez is the newly named Interim Director of Assessment. Moving forward, the position is posted until filled. (http://www.cde.ca.gov/re/di/or/ada.asp)
- Kristen Brown is the newly named Smarter Balanced Coordinator for CDE.

FYI: CDE SBAC reps are starting to meet with CA CISC and the Technology group.

CALPADS (Keric Ashley)  Handout #1


Governor’s State of the State: Will discuss school funding, particularly a per pupil funding formula. Department of Finance asked CDE for data out of CALPADS to do projections - # of EL, SES, Total enrollment, etc. This is one more reminder to keep CALPADS data current and reliable. Some funding is based on it – Title III and EIA based on EL counts. Basic enrollment data is also used in EIA.

English Learner Data – historically inconsistent data relative to how ELs are identified, reclassified, what happens when they move school to school or district to district. CALPADS is bringing those issues to the forefront.

EXAMPLE:
- Requirement for Home Language Survey. (Answer four questions to determine primary language.)
- If HL is other than English, then the student is given CELDT within 30 days of enrollment.
- Problem: When a student moves sites/districts, the chance of cumulative file traveling with student is low.
- CALPADS makes it possible (once the data is loaded) to instantaneously view student status; however, this won’t resolve issues like:
  - I have an EO student and he transfers to new school. The new school does HLS every year, and now the survey says HL is not English.

A letter went out to the field a month ago to redefine designations. Please review:
http://www.cde.ca.gov/ds/sp/cl/documents/elas121411.doc

Common Core (Tom Adams, Barbara Murchison)  Handout #2

Barbara Murchison is the Common Core Integrated Action Team Facilitator. This team is an effort on Superintendent Tom Torlakson’s part to help CDE work in a cohesive fashion.

- CCSS Draft System Implementation Plan for CA was presented to SBE 1/12/2012.
  http://www.cde.ca.gov/be/ag/ag/yr12/documents/jan12item09a01.doc
- Big Idea: This is a system that needs to be implemented. Everything that’s in there is considered a priority. Seven Guiding Strategies have been imposed on the system in order to make it manageable.
  - Review Suggestions and Opportunities for LEAs: pp. 27 – 34
    - Are you already part of the SBAC listserv? The Common Core listserv?
      - Join the SBAC electronic mailing list by sending a blank e-mail to subscribe-sbac@mlist.cde.ca.gov
      - Join the Common Core Resources by sending a “blank” message to join-commoncore@mlist.cde.ca.gov
    - To contact the team: CommonCoreTeam@cde.ca.gov

Instructional Quality Commission – Applications are out there and the deadline is January 25th.
Application: http://www.cde.ca.gov/be/cc/ab/documents/advapplication20111114.doc
Supplemental Questionnaire: http://www.cde.ca.gov/be/cc/ab/documents/sqiqc.doc
- There are 12 openings: 6 must be teachers. Applicants should stress experience working with standards and curriculum. They are not expected to be fully versed in CCSS, but the applicant should understand them and their importance.
- Next Important date: At the March SBE meeting, Commissioners will be appointed.
  - The SBE has to provide a forum for the Commission.
- Upcoming – Math Framework Committee. 6-8 months later is ELA.

Math Framework – At the SBE meeting on 1/12/2012, the timeline and application were approved.
- The framework expresses implementation of CCSS Math standards.
  - SBE asked: What’s the focus of the framework? How will it resolve grade 8 mathematics/Algebra? What can the framework do to solve these issues?
  - Solutions will have to come from the field.
- Math focus groups will occur soon: San Bernardino, San Diego, San Mateo, CDE
  - Purpose is to ask the field: What works best for you? What kind of guidance do you want?
  - Everything comes back to the SBE in July
    - Guidance for Framework
    - Framework Committee members

Supplemental Instructional Materials Review (BRIDGE MATERIALS)
- CDE is still short on reviewers. CDE needs a total of 100 each subject area. Can you send a representative?
- Next Wed (1/25/2012): Publisher’s briefing. They’ll see the standards map, Category 2 materials. There are a number of standards that need to be met at each grade level.
- Intervention programs – CDE is not going to ask for supplementation because they are skills based programs. They will do an alignment study between ’97 standards met and closest matches to CCSS.
- November 2012: All approved and non-appeals programs move forward
  - January 2013 is the second wave.
  - February 2013 the final list will be posted. This is not an adoption.

SMARTER Balanced (Kristen Brown)  Handout #2.5
- IT Readiness Tool – Anticipated in March 2012
- Interim assessments – Would incur costs. The question is who will bear those costs? Districts? State?
- Formative tools and processes would not incur a cost.

AB 250 Update (Diane Hernandez, John Boivin)  Handout #3
- AB 250 deals with “the reauthorization of the statewide pupil assessment system.” It modifies existing Ed Code relative to curriculum frameworks, PD, and assessment components.
- Requires future assessments to conform to ESEA
- Requires Superintendent/SBE/Stakeholders to recommend changes to assessment system and transition plan
- Requires SSPI recommendations in 16 specific areas (see pp. 2-3)
  - What’s not there?
    - CAHSEE + Alternative Means
    - Independent Evaluator
    - Use of test results for teacher evaluation

Santa Clara Repository of Benchmark and Performance Assessment Resources (Bill Conrad)

SEE LAST PAGE OF HANDOUTS. Santa Clara has built an online repository of benchmarks so districts can share materials and support one another in improving existing benchmarks.
Context of legislation: Legislature passed SB 219 to address the concern that some districts transferred students out of traditional high schools to alternative education programs (AEPs) just prior to testing. This process seeks to hold traditional schools and districts accountable for students who transfer to AEPs by rolling back their test scores. **THIS RELATES ONLY TO API, AND NOT AYP.**

- CALPADS Exit Code T167 – Rollback of test scores will start here. (Affects about 7,000 students in the state.) (Handout #4)

**STARTING POINT:** Usually, to be included in API in traditional schools, first ask: Was the student continuously enrolled since the Census date? For students who transfer from traditional school to traditional school, the historic rules remain in place. (See HANDOUT #5, page 1, Definition of “Continuously Enrolled”)

**CHANGES:** See Handout #5, pp. 2-3 for the rollback of Assessment results and attribution of Dropouts to for API.

**Working with PI Schools (Christine Swenson) No Handout**

¾ of Title I districts are PI LEAs = 443.
The # of schools in some level of PI is approximately 3800.

Primary method of support is offering systemic report to LEAs. RSDSS (County office: Regional System of District and School Support) is a key piece of support to PI schools.

- When LEAs enter PI, they need to revise their LEA Plan.
- CDE has provided feedback regarding goals, articulated timelines, expected outcomes and measurements...
- Federal Program Monitoring – Risk factors include either one or both: Fiscal and/or Programmatic Issues (low accountability results)
  - Reviewers are looking for evidence that the plan is evaluated annually
    - Evidence could be as simple as a Board Agenda item and report on progress toward meeting goals.
  - Reviewers are also looking for evidence the plan is up-to-date.
    - Revision is optional, annual review is required.

**ESEA Flexibility (Waiver): CA would end up with about 350 Priority schools and 600 Focus Schools**

- Priority schools’ intervention is SIG-like, but SEA can define that with more detail.
- How do we pay for this on a compressed timeline?
- What happens if the state applies for a waiver, and then ESEA is reauthorized, and there’s not absolute alignment on the components?

**CAHSEE/CHSPE/GED/PFT (Linda Hooper, Deb Probst, Denise Moore) Handouts #6, 7, and 8**

Denise Moore – GED Program

1) **New assessment in 2014-15: Offered on a Computer-based Test Format (NOT adaptive)**
   
a. GED Testing Service is THE national oversight committee. Working on test to align with CCSS and assure career and college readiness.
   
b. Will require test taker to have basic computer skills. It will be harder than it is now, based on the standards.
   i. Literacy
   ii. Math
   iii. Science
   iv. Social Studies
2) **Computer-Based Testing Project strives to create comprehensive GED program prepare adults for career or post-secondary education**
   a. Two phase roll-out
   b. Phase II: CA volunteered to be part of first group of states
      i. 20 testing centers are piloting computer-based testing (Pearson View)
      ii. Questions about transition – the state is looking at a gradual transition so that the 20 centers can offer computer-testing while others offer paper-pencil
   - In 2014-15, all that states can offer is computer-based testing
   - Historical records will be archived with Pearson View/GED Testing Service

**Deb Probst —CAHSEE**
- Developing Alternative Means for SWD
- Met with Advisory Commission on Special Education (ACSE) on January 5th
  - Recommend extending deadline from July 2012 to January 2013
    - Advised to implement Tier I and not to implement Tier II
  - The group will recommend to SBE to amend regulations. If no change is made by June 30, then the exemption ends.
  - Info will go out to the field soon.
  - CDE has determined that scale scores could be used on CMA ELA grade 10 and Algebra I. Results will go to SBE in March.
  - SSPI will sponsor legislation to extend implementation possibly to coincide with implementation of CCSS implementation dates

**Linda Hooper - PFT**
- You need to submit PFT data by June 30th to be able to take advantage of July 5 preliminary data file availability
- Correction window opens July 5 and remains open during summer through September 4
- October 2012 Data Release
- NEW Excel VO2Max calculator is in review and will be posted soon
- STAR Pre-ID and FITNESSGRAM Template Generator (See page 2)

**STAR (John Boivin)**  
**NO HANDOUT**

**Don Killmer**
- **4 items to go to SBE in March**
  - STS Standard Setting - Approval to go out for public comment (middle and high school grades, EOC Algebra and Geometry
  - CMA – PLDs presented for adoption (HS, Phase II grades 10-11 ELA and Geometry)
  - Apportionment
  - Generalized AB 250 update item – Reauthorization of STAR
  - **IN 2012: Security Audits are Back!!**
  - These will occur before, during and after testing at district as well as site level
  - Randomly selected
  - Plan is in approval stages at the department
    - ETS proposes 200 (over STAR cycle – inclusive of writing administrations)
  - Mark discrimination analyses has returned too
    - It’s the automated process that reviews the optically scanned answer documents to determine if there are irregularities

**Mark McLean**
- **Highlights from STAR Workshops**
  - Writing tests are coming quickly – The writing tests are not optional
Writing test change for accommodations
   • Students’ additional testing time is limited to completion within one day
   • Prompts and passages may be read aloud

Multiple choice test – new CDS code for district – home hospital or independent study

- Reminders about administration
  • Tell examiners to follow the DFA’s closely (for standardization and to avoid skipping sections)
  • Check IEP’s and ensure they’re giving the right tests to the students
  • For EOC math and science, mark the bubble for which math or science test the student takes (and avoid incurring rescoring costs)
  • Students who are not testing may not stay in the classroom where other students are testing
    ▪ Parent exemption
    ▪ If there’s a 10th/11th grade science class and 10th grade life science test is administered, the 11th grade students should not be in the classroom. This is a breach of test security.

- CST Rulers are for 2nd grade students only. The label is on the packaging this year.

English Language Proficiency Assessments (ELPA) (Lily Roberts, Tavi Popp)

- EDS Won the CELDT contract

Two bills passed: AB 124 and SB 753
  - AB 124 – ELD standards development: Email went out 1/11/2012 about focus groups to occur in February. February 23rd in San Diego.
    ▪ Applications for focus group membership
      ▪ Contact person: Erin Koepke
    ▪ There is an Implementation plan due to the Governor – how will these standards be included in CA standards and in ELPA?
      ▪ Governor’s Budget Proposal included $0 for this work
  - SB 753 – Banking test scores and move test for annual assessment at point in time when 55% of instruction is complete.
    ▪ ED rejected banking scores
    ▪ Changing test window: Reporting results would be in February and AMAOs would be reported in July
    ▪ ED was non-committal about moving it. They wanted more information about accountability compliance.
  - SB 873 – On hold
    - CELDT Regs were pulled b/c of technical issues relative to HLS and ASL

CELDT TOT Email went out today: Tentative Schedule
  - OC – Santa Ana on April 18th

New Item Type: Speaking to produce more language, but has to be scorable in a rubric people can agree with and that is workable
  - These items have been pilot tested and they’re now field testing

Data Review Module with be February 13 through March 9th

CELDT 201B: Once you have the data, how do you use it?
  - 201A is about Data Management.

English-Only Study
  - Reinforces commitment to separating K and 1 testing

Report to Legislature on how K-1 Reading and Writing testing went
  - Since LEA staff do have an opinion, a survey is being conducted
  - As of today, 890+ people have responded
### Introduction:
The purpose of this Benchmark Assessment Resource is to provide the opportunity for our SCC District Assessment Teams to gain access to the variety of tools and resources that our Assessment and Accountability teams use in the development and use of Benchmark Assessments throughout our county.

<table>
<thead>
<tr>
<th>District</th>
<th>English Language Arts Benchmarks</th>
<th>Mathematics Benchmarks</th>
<th>Science Benchmarks</th>
<th>Social Science Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades K-5</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------</td>
<td>------------------------</td>
<td>--------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades K-5</td>
</tr>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades 6-8</td>
</tr>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades 9-12</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------</td>
<td>------------------------</td>
<td>------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades K-5</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------</td>
<td>------------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>Grades K-5 Grades 6-8 Grades 9-12</td>
<td>Grades K-5 Grades 6-8 Grades 9-12</td>
<td>Grades K-5 Grades 6-8 Grades 9-12</td>
<td>Grades K-5 Grades 6-8 Grades 9-12</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------</td>
<td>------------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
</tr>
<tr>
<td></td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
</tr>
<tr>
<td>Mount Pleasant Elementary</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
</tr>
<tr>
<td></td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
</tr>
<tr>
<td></td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
</tr>
<tr>
<td>Mountain View Whisman</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
</tr>
<tr>
<td></td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
</tr>
<tr>
<td></td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
</tr>
<tr>
<td></td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
</tr>
<tr>
<td></td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
</tr>
<tr>
<td>Oak Grove Elementary</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
<td>• Pacing Guide</td>
</tr>
<tr>
<td></td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
<td>• Blueprint</td>
</tr>
<tr>
<td></td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
<td>• Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
<td>• Examples</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------</td>
<td>------------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>Grades K-5</td>
<td>Grades 6-8</td>
<td>Grades 9-12</td>
<td>Grades K-5</td>
</tr>
<tr>
<td>Orchard Elementary</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
</tr>
<tr>
<td>Palo Alto Unified</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
</tr>
<tr>
<td>San Jose Unified</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
</tr>
<tr>
<td>Santa Clara COE</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
</tr>
<tr>
<td>Santa Clara Unified</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
<td>• Pacing Guide • Blueprint • Performance Assessments • Examples</td>
</tr>
<tr>
<td>District</td>
<td>English Language Arts Benchmarks</td>
<td>Mathematics Benchmarks</td>
<td>Science Benchmarks</td>
<td>Social Science Benchmarks</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------</td>
<td>------------------------</td>
<td>-------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
<td>Blueprint</td>
</tr>
<tr>
<td></td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
<td>Performance Assessments</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
<td>Examples</td>
</tr>
</tbody>
</table>
District Technology Capabilities for the New System

- The SBAC in partnership with many other groups seeks to develop an IT readiness tool.
- This tool will support the member States and their local education agencies (LEAs) as they evaluate their current technology and infrastructure in terms of readiness to implement the new assessment system and identify strategies to update their technology based on gaps identified.
- The readiness tool will include an evaluation of rules, policies, infrastructure, hardware, software, staffing size and preparedness, required data collection, and associated information systems deemed essential to a successful implementation of the new assessment system.
- The tool will guide the State, LEA, or school through a process of establishing strategies to address technology needs identified by the readiness tool.
- Finally, the State, LEA, or school will be able to use the tool as a continuing work space to monitor and evaluate changes that are made in the “system” and determine the impact of readiness updates.
- Later this month, in collaboration with PARCC, DLM and NCSC, SBAC will provide additional information about the IT readiness tool to member states. It is anticipated that the tool will be ready in spring 2012.

Test Specifications

- Designing tests that will harness the power of computers in new ways and assess skills that multiple choice tests cannot.
- SBAC currently seeks the development of 10,000 selected response items and 420 performance tasks in Math and English Language Arts.
- Pilot testing of items will begin in 2012-13. Most scoring will be done by machine.
- Teachers will be hired to write items and tasks and review items for content, alignment, accessibility, and bias.
- In September, SBAC will issue a solicitation for the development of guidelines for accessibility and accommodations for English Learners and Students with Disabilities.
- The solicitation requests work on other parts of its testing system, such as its early-year diagnostic assessments and tests of speaking and listening skills.

Mathematics Content Specifications Review (Round 2)

- Member states submitted feedback on the final review of the Mathematics Content Specifications on January 3, 2012.
- Once finalized, the content specifications for mathematics and ELA/literacy will serve as the basis for the SMARTER Balanced system of summative and interim assessments and formative assessment. The Mathematics Content Specifications materials are available at http://www.smarterbalanced.org/Resources.aspx.

Resources

Smarter Balanced Assessments Consortium Web Site
http://www.k12.wa.us/smarter/

Santa Clara County Office of Education Facebook
http://www.facebook.com/#!/SCCOECCommonCore

CDE Common Core Web Site
http://www.cde.ca.gov/ci/cc

CDE on Twitter
http://twitter.com/#!/TorlaksonSSPI/

CDE on I-Tunes
http://www.cde.ca.gov/re/mm/it/