Colorado Department of Education

Information Session

Senate Education Committee

January 17, 2013

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Attachment B

Agenda

- **Overview of Colorado's Education Landscape**
- **Implementation Updates:**
  - READ Act
  - State student assessment system
- **Brief Orientation on the Colorado Growth Model**
- **Overview of STEM Initiatives**

Colorado's Education Landscape

Size & Demographics:

- 854,265 PreK-12 public school students, increase of 15% since 2001
- 14.4% English language learners, 41% free and reduced lunch, and 43.9% ethnic minority (with 31.9% Hispanic)
- 178 school districts, ranging from 85,751 students in Jefferson County to 9 students in Agate

Composition and Control:

- 80% of the state's districts are considered rural, serving nearly 20% of the state's population.
- 186 charter schools serve close to 10% of all students.
- Local districts have control over curriculum, high school graduation requirements, and all hiring.

Performance:

- 73.9% high school student graduate in 4 years
- Colorado 4th and 8th grade students perform above the national average in math and reading and near the top for 8th graders in science on the National Assessment of Educational Progress (NAEP), but achievement gaps for low income and minority students are large and persistent.

Data based on SY2010-11

Colorado's Education Landscape

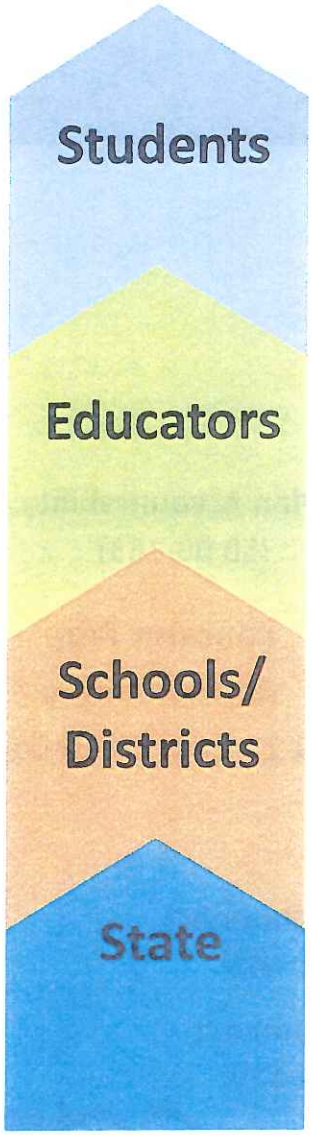
Education Governance:

- Elected State Board of Education (7 members, elected by Congressional districts)
- Commissioner Robert Hammond, appointed by the State Board of Education

Colorado Department of Education:

- Approximately 450 full time staff
- 75% of staff are at-will

Goals



Successful students

Prepare students to thrive in their education and in a globally competitive workforce.

- Ensure every student is on track to graduate postsecondary and workforce ready.
- Increase achievement for all students and close achievement gaps.
- Ensure students graduate ready for success in postsecondary education and the workforce.
- Increase national and international competitiveness for all students.

Great teachers and leaders

Ensure effective educators for every student and effective leaders for every school and district.

- Increase and support the effectiveness of all educators.
- Optimize the preparation, retention, and effectiveness of new educators.
- Eliminate the educator equity gap.

Outstanding schools and districts

Build the capacity of schools and districts to meet the needs of Colorado students and their families.

- Increase school and district performance.
- Turnaround the state's lowest performing districts and schools.
- Foster innovation and expand access to a rich array of high quality school choices for students.

Best education system in the nation

Build the best education system in the nation.

- Lead the nation in policy, innovation, and positive outcomes for students.
- Operate with excellence, efficiency, and effectiveness to become the best SEA in the nation.
- Attract and retain outstanding talent to CDE.

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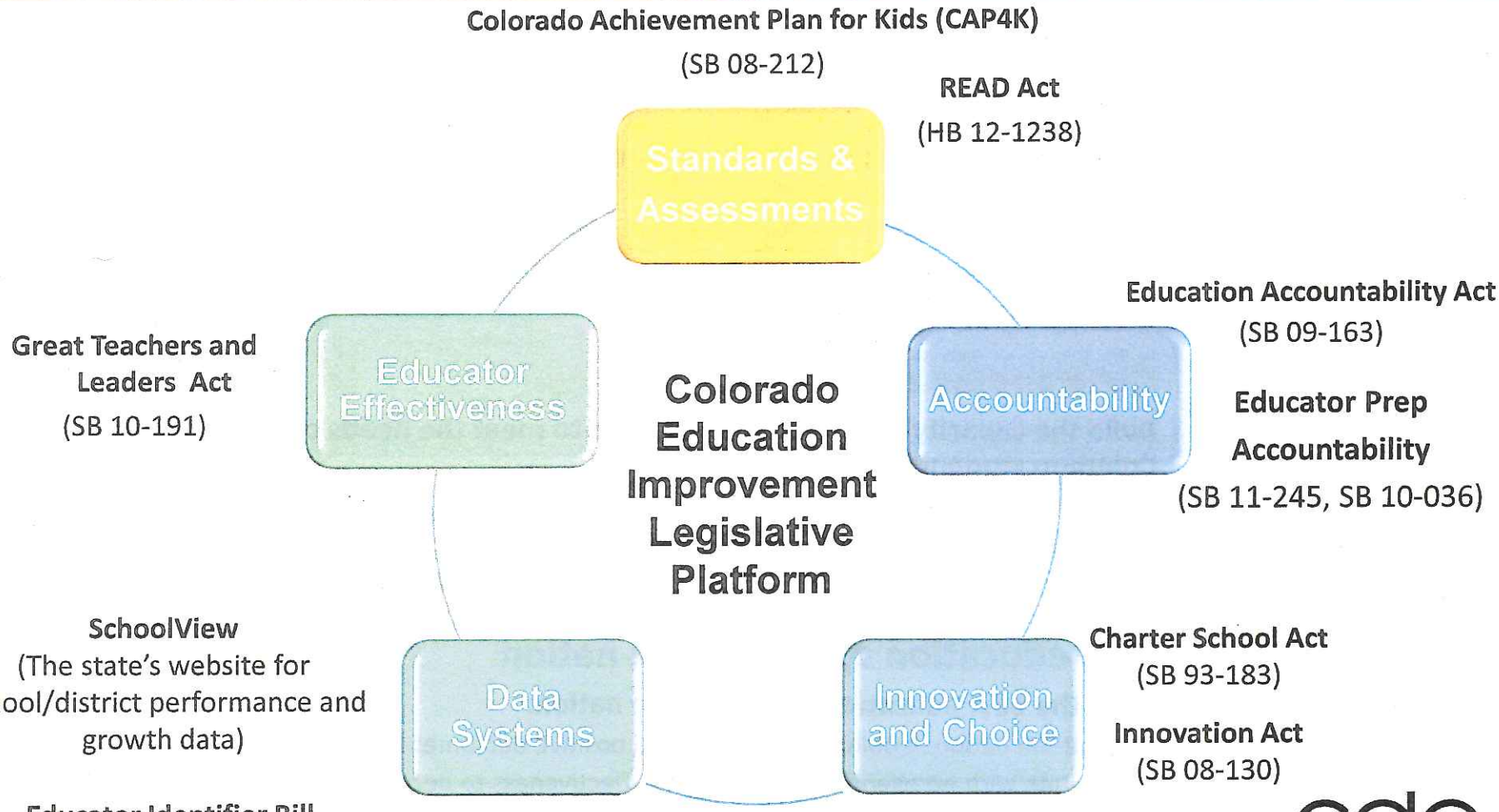
Education Improvement Policy Agenda



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Driving Questions

	What do we want students, educators, schools, and districts to know and be able to do?	How will we know if expectations are met?	How will we respond when help is needed and to support continued growth?
Students	Colorado Academic Standards	Assessments	• READ plans • Response to Intervention • Positive Behavior Intervention • Targeted interventions • Individual Education Plans
Educators	Educator quality standards	Educator evaluations	• Induction • Mentoring • Professional development plans • Remediation plans
Schools/ Districts	Performance indicators	School and district performance frameworks	• Unified planning • Priority • Turnaround

The READ Act: An Update

Pati Montgomery, Executive Director, Office of Literacy

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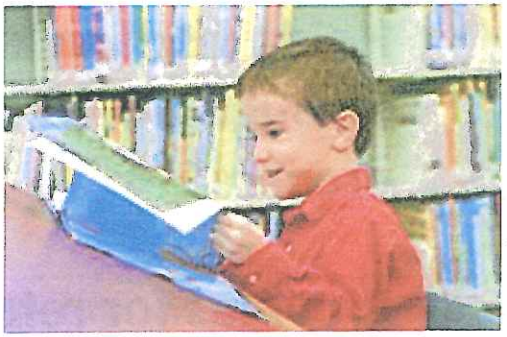
Colorado Reading to Ensure Academic Development Act

(HB 12-1238, Colorado READ Act)

- Repeals and replaces the Colorado Basic Literacy Act
- Focuses on K-3 literacy development
- Directs support to students with a significant reading deficiency



- Includes specific guidance regarding literacy assessment
- Requires READ plans, individual intervention plans, for students with a significant reading deficiency

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Colorado READ Act Provisions

- Contains requirements for parent communication and involvement
- Holds districts and schools accountable through the Unified Improvement Plan process
- Provides for retention decisions for students completing grades K-3 with a significant reading deficiency beginning in 2013-14
- Provides funding to support intervention

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READ Act Resources

- **The READ Act provides multiple resources to schools and districts including:**
  - Formula funding for students identified with a significant reading deficiency
  - Early literacy competitive grant opportunity
  - Regional technical assistance to the field
  - Resource bank of advisory instructional programming and professional development

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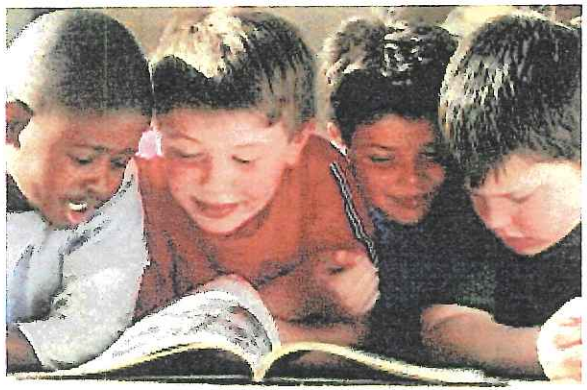
Implementation Update: CDE Office of Literacy

- Executive Director—Pati Montgomery
- Assistant Director—Dr. Dian Prestwich
- Regional technical assistance support
  - Plan to fill positions by the end of February



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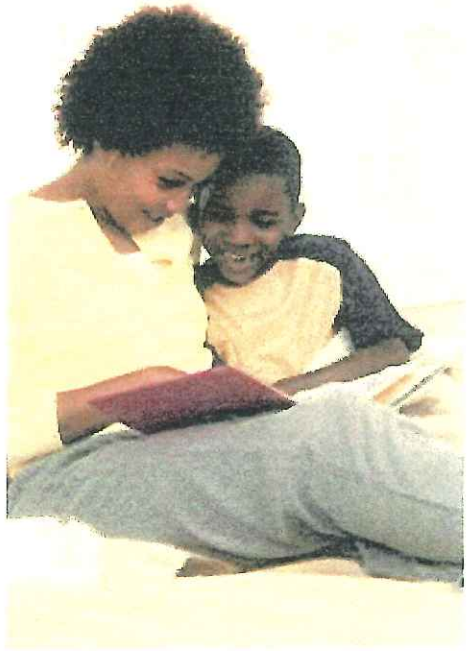
Statewide Outreach Meetings



- **Conducted regional informational meetings to solicit input on READ Act rules**
  - Alamosa, Durango, Pueblo, Greeley, La Junta, Denver, Steamboat Springs, Limon, Grand Junction, Colorado Springs, and a recorded webinar
- **Over 450 participants from across the state**

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Statewide Outreach Meetings

- **Feedback fell into 4 general areas:**
  - The definition of a significant reading deficiency should be specific, clear and concise
  - Assesses the 5 components of reading
  - Rigorous and ensures students can become proficient
  - Are aligned to the Colorado Academic Standards

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Key Milestones

- Draft rules presented to the State Board of Education in November
- Rulemaking hearings scheduled for January and February with Board adoption scheduled for mid-March

- Pursuant to HB 12-1345, completed the Early Literacy Assessment Request for Proposal (RFP) and have awarded the proposal to Wireless Generation

Key Milestones

- Currently issuing Requests For Information (RFIs) for approved diagnostic and summative assessments
- Currently drafting RFIs for advisory lists of professional development and instructional programming

- Finalizing the RFP for the Early Literacy Grant

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What is Just Ahead?

Spring of 2013:

- **Regional training:**
  - Identifying students who have a significant reading deficiency
  - READ Plan Templates

Summer of 2013:

- **Regional Literacy Summits**
  - Leadership for Improved Literacy Achievement
  - Targeted audiences include kindergarten and first grade teachers, special education teachers, principals, district leadership

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An Update on Colorado's New Summative Assessments

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Summative Assessment Timeline

2013

- TCAP
- Colorado ACT

2014

- TCAP Reading, Writing and Math
- New Social Studies and Science assessments expected to be operational
- Colorado ACT

2015

- New English Language Arts and Mathematics assessments expected to be operational
- Second year of new Social Studies and Science assessments
- Colorado ACT

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Science and Social Studies Assessments

- **Based on the Colorado Academic Standards**

- **Grades:**
  - Science: grades 5, 8 and once in high school
  - Social Studies: grades 4, 7 and once in high school

- **Timeline**
  - Operational administration planned for 2014

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Science and Social Studies Assessments

- **Attain balance:**
  - Innovation with technical soundness and feasibility
  - Breadth with depth

- **Take advantage of technology:**
  - Development: item type
  - Administration: computer-based
  - Scoring: automated and artificial intelligence

Science and Social Studies General Assessments

- **Item types:**
  - Selected response
  - Constructed response
  - Simulation/performance-based

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Science and Social Studies Sample Items

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Measuring Local Readiness

Districts are in the process of completing the Technology Readiness Tool that will provide software, hardware and internet connectivity information to the districts and to the state.

Depending on the issues discovered, the following steps can be taken:

- Establish a window and administration procedures so that the required student: computer ratio is more flexible.
- CDE will assist districts in developing administration plans that could include cooperative agreements.
- Districts that discover they need additional equipment may choose to allocate some of their fiscal resources to acquiring technology that could be used for both instruction and assessment.

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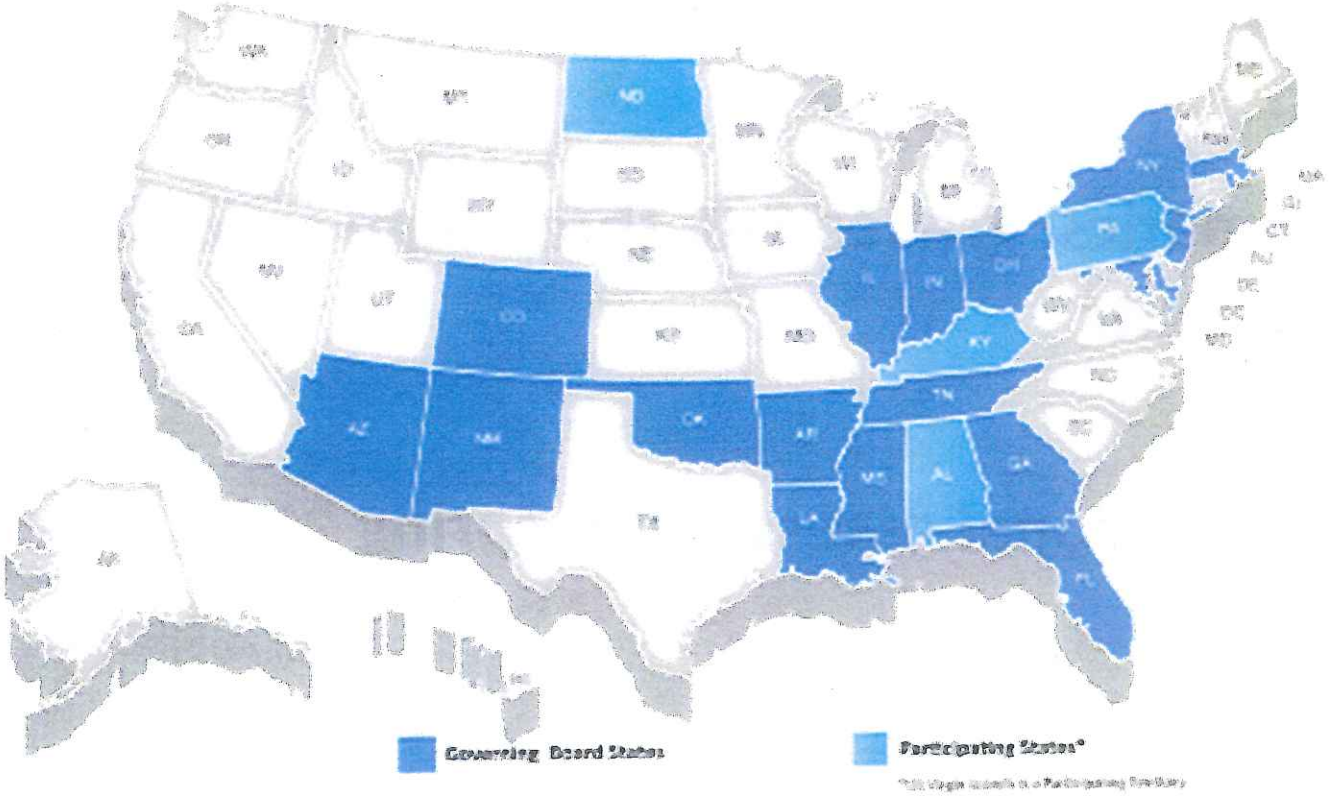
Partnership for Assessment of Readiness for College and Careers



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PARCC

- English Language Arts: grades 3-11
- Mathematics: grades 3-8, three high school assessments
- First operational assessment: spring 2015

PARCC Assessment Design

Performance-Based Assessment

- Extended tasks
- Applications of concepts and skills

End-of-Year Assessment

- Innovative, computer-based items

Speaking and Listening Assessment (Required): Locally scored

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College- and Career-Ready Determinations (CCRDs)

www.parcconline.org

- **The CCRD policy clearly defines the level of *academic* preparation in English language arts/literacy and mathematics needed for students to be successful in entry-level, credit-bearing courses in two- and four-year public institutions of higher education.**

- **Benefits of the CCRDs**
  - Students who attain a CCRD will be able to enter directly into certain entry-level, credit-bearing courses without having to take placement tests.
  - States within the PARCC consortium will have a common benchmark to define college and career readiness in English language arts/literacy and in mathematics.

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Implication of Increased Rigor

Given the increased rigor of both the Colorado Academic Standards and the new assessments, it is reasonable to prepare for a drop in performance based on them compared to the performance demonstrated under the current system.

Overview of the Colorado Growth Model

Dr. Keith Owen, Deputy Commissioner and Alyssa Pearson,
Executive Director of Accountability and Data Analysis

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Colorado Growth Model (CGM) Purpose

- **Designed to answer 2 main questions**
  - How much growth?
  - Was the growth enough?

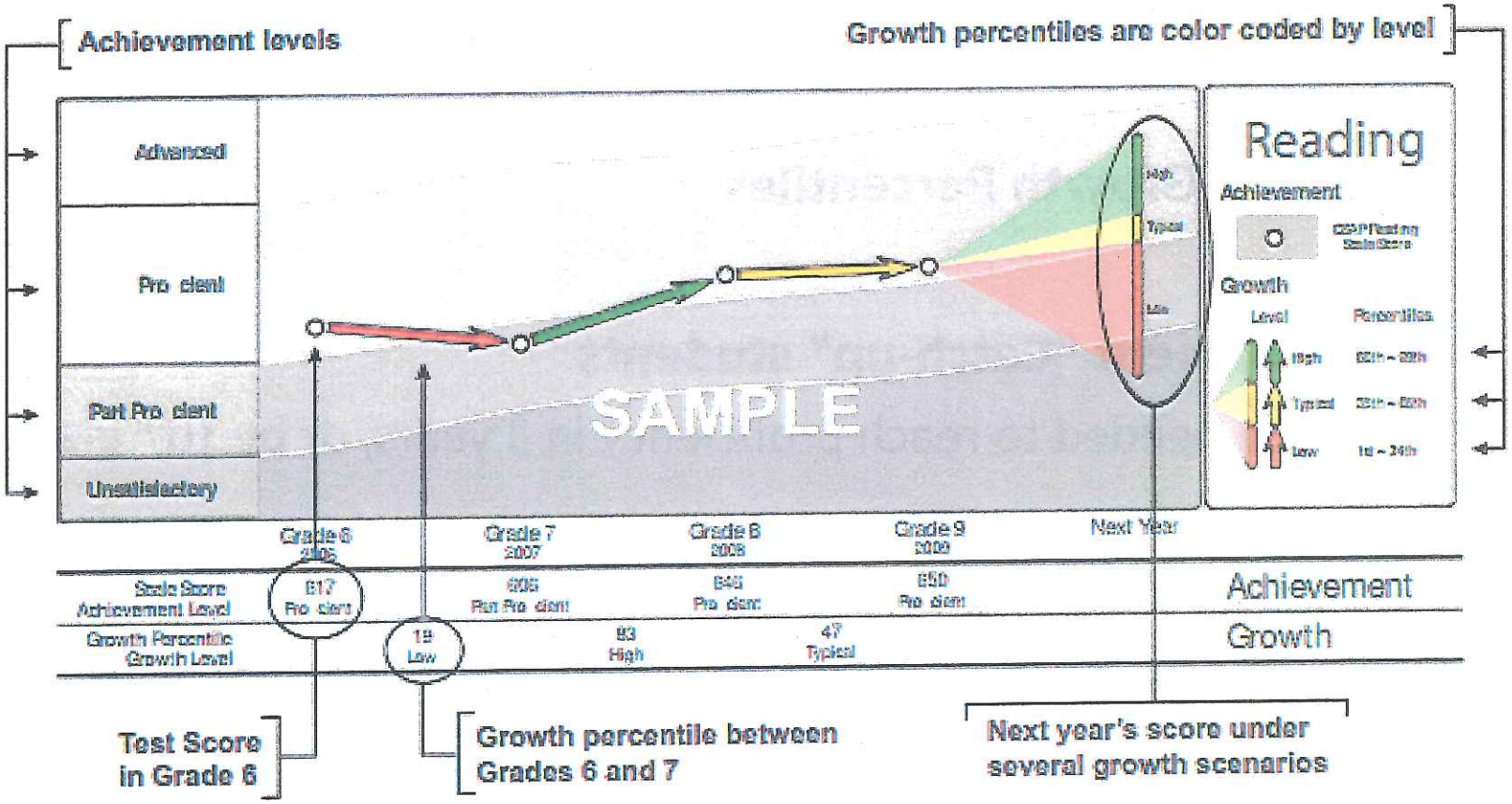
- **We can answer these questions at multiple levels**
  - Student
  - Student groups
  - *Teacher*
  - Grade
  - School
  - District
  - State

Colorado Growth Model
Student Level

- **How much growth?**

- **Student Growth Percentiles**
  - Output from a statistical model
  - Describes a student's growth on the state assessment over time, as compared to the student's academic peers

Student Level Growth Report



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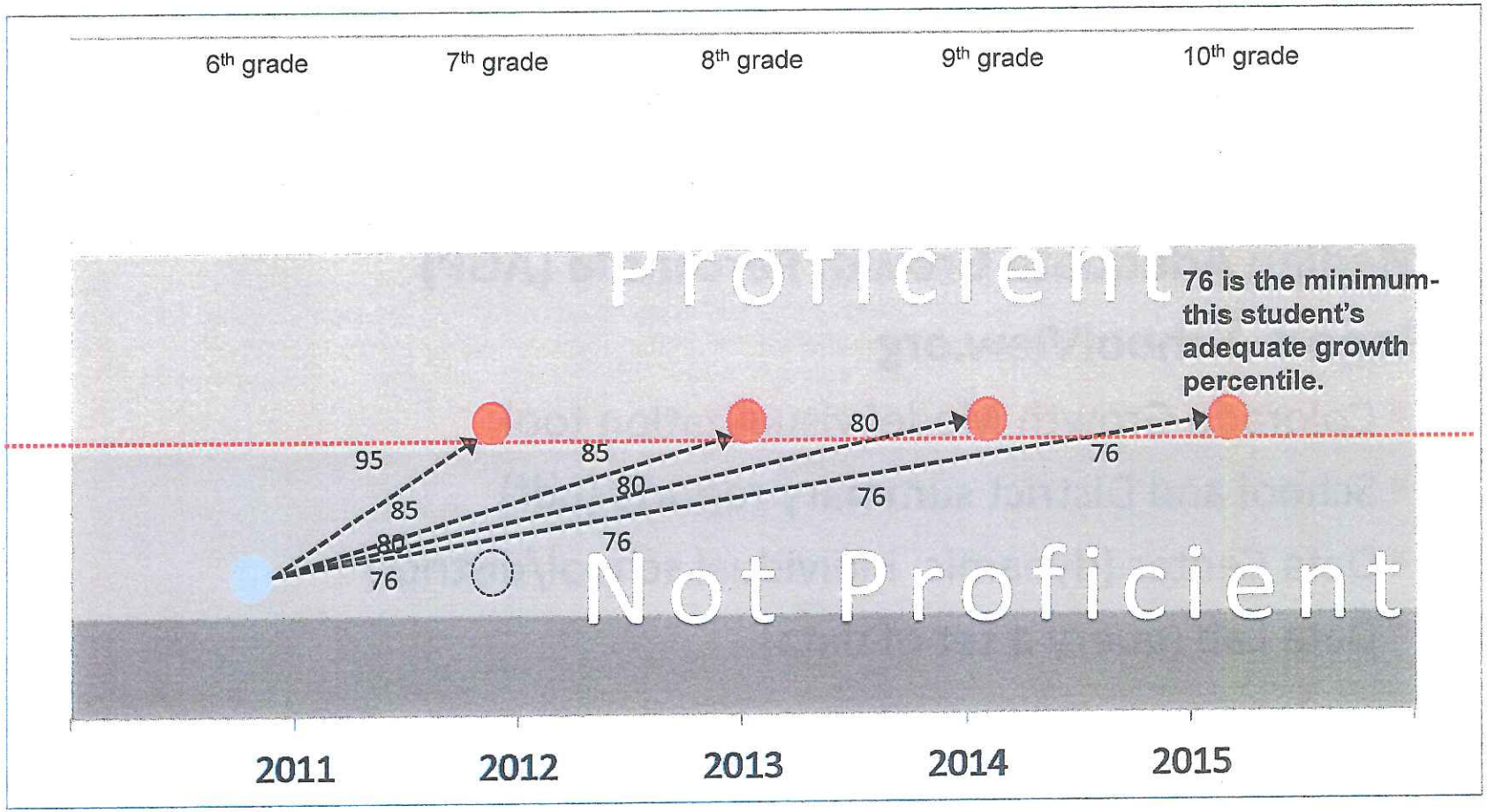
Student Adequate Growth Percentiles

- **Was it enough?**
- **Adequate Growth Percentiles**
- **Non-proficient "Catch-up" students**
  - Growth needed to reach proficiency in 3 years, or by 10th grade
- **Proficient "Keep-up" students**
  - Growth needed to maintain proficiency for the next 3 years, or by 10th grade

Student Adequate Growth Percentiles



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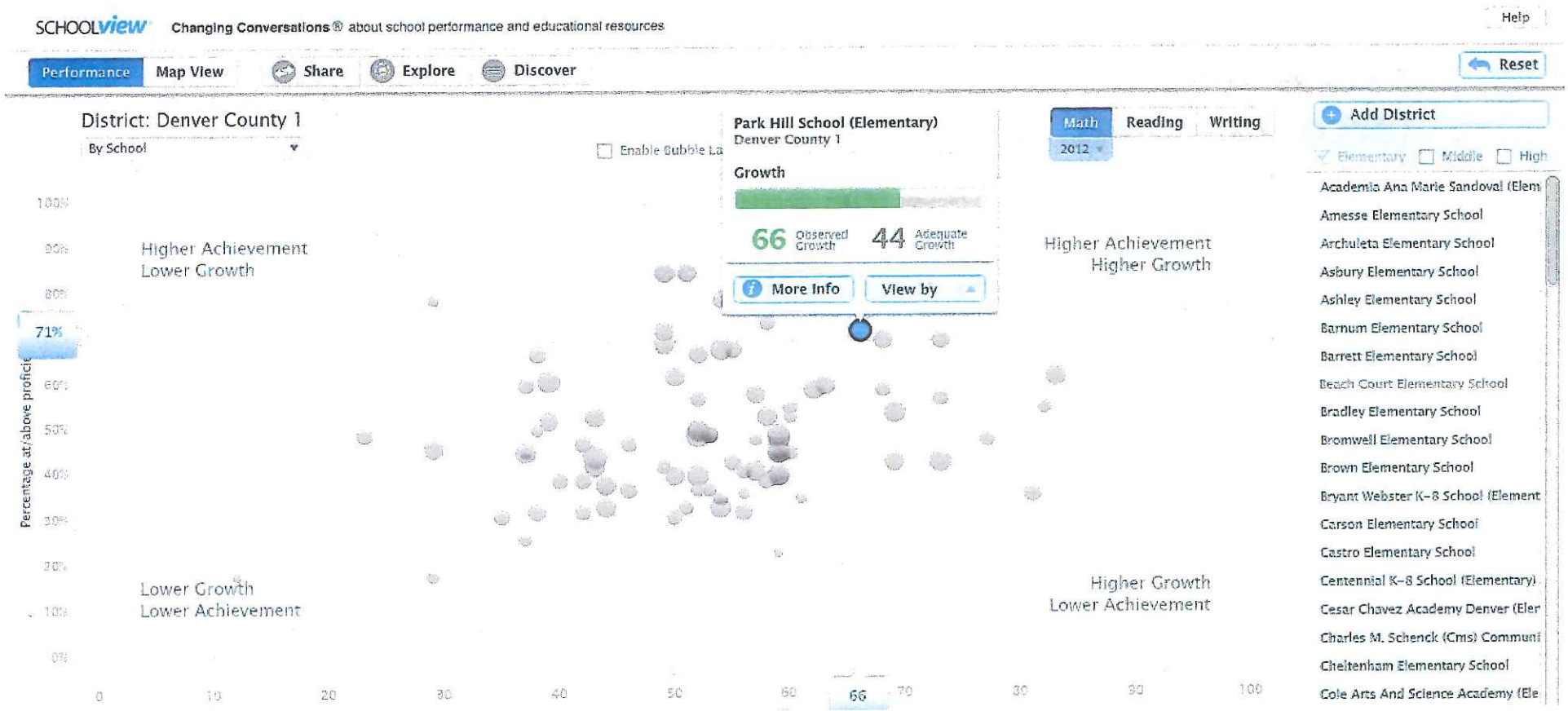
Colorado Growth Model- Aggregated

- **Reporting at a "rolled up" level**
- **Use the median of the student growth percentiles**
- **Median Growth Percentile (MGP)**
- **Median Adequate Growth Percentile (AGP)**
- **Report- SchoolView.org**
  - Colorado Growth Model visualization tool
  - School and District summary reports (pdf)
  - Data Center (dynamic, individual school/district)
  - Data Lab (query a set of data)

SchoolView – Colorado Growth Model



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Colorado Growth Model
Main Uses

- **Describing growth of students, schools and districts**
- **Part of the School and District Performance Frameworks (accountability)**
  - More comparable measures among schools
- **Part of the data analysis for Improvement Planning**

Overview of STEM Education in Colorado

Dr. Violeta García

STEM Education Coordinator

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What is STEM?

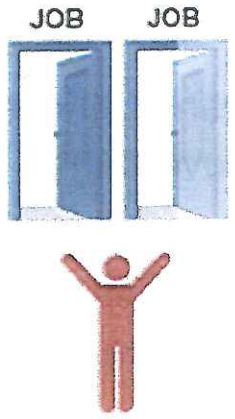
- STEM is the acronym that stands for *Science, Technology, Engineering, and Mathematics*.
- When arts is incorporated, the acronym becomes STEAM.
- STEM education is "an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering and mathematics in context that make connections between school, community, work, and the global enterprise, enabling the development of STEM literacy and with it the ability to compete in the new economy." (Tsupros, Kohler, & Hallinen, 2009).

STEM Needs in Colorado

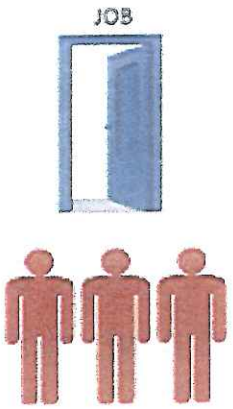
STEM SKILLS ARE IN DEMAND

In Colorado, STEM skills have stayed in demand even through the economic downturn.

STEM:
1.5 jobs for every
1 unemployed person



Non-STEM:
3.0 unemployed people for every **1 job**



Change the Equation Vital Signs Report
www.changetheequation.org/#Colorado

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Colorado STEM Needs and Assets

- **Needs:**
  - Approximately 49% of Colorado high school students score proficient or advanced on the science TCAP/CSAP.
  - Approximately 36% of Colorado high school students score proficient or advanced on the math TCAP/CSAP.
  - Significant achievement gaps persist based on income and race/ethnicity.
- **Assets:**
  - There has been a slow but steady upward trend in mathematics achievement overall and in elementary science achievement.
  - Colorado 8th graders scored higher than national and international averages in both math and science on the 2011 TIMSS study.
  - Colorado has adopted new, more rigorous mathematics and science standards.
  - There is growing attention to STEM in the state and at the national level.

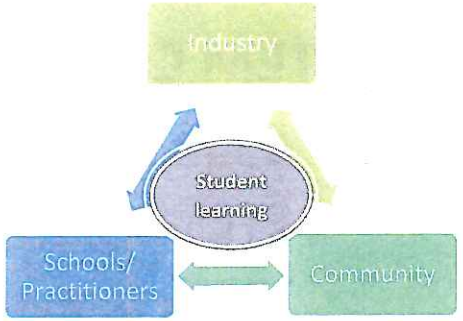
Colorado Race to the Top (RTTT) Background and STEM Elements

- **Colorado's Race to the Top Grant**
  - $17.9 million (split between state and locals) over four years (Dec 2011-Dec 2015)

- **STEM Component**
  - $500,000
  - STEM Coordinator
  - STEM in Action Program

Focus of STEM RTTT

- **STEM Curriculum Development**
  - Ensure integration of STEM content in instructional resources
  - Build capacity throughout the state through standards based curriculum design training and resources
- **STEM in Action Program**
  - Grant program to begin in 2012-13 school year
  - Connect educators and students to opportunities in STEM industries
  - Priority on reaching traditionally underserved populations and reducing proficiency gaps for these student groups



Opportunities and Next Steps

- **Collaborating with the Governor's Office and State Agencies on a STEM Action Plan**
  - Education Leadership Council: STEM workforce committee, CDE playing a leadership role in the STEM action plan
  - Colorado Department of Labor and Employment (CDLE)
  - Department of Higher Education
    - Interagency data sharing: CDE, CDLE, DHE
    - College in Colorado career and college planning
    - Career and Technical Education
    - Joint responsibility for teacher recruitment and preparation
  - STEMosphere – May 4th- Opportunities for learners to experience STEM hands-on.
    - P-20 partnership (Cap4Kids)

Opportunities and Next Steps

- **Office of Economic Development and International Trade**
  - Colorado Blueprint
  - Objective V
    - Education and training - 14 key industry clusters
- **Education partners**
  - eNetColorado: online delivery of professional development to reach
  - MESA
  - Colorado Legacy Foundation: AP work
  - Colorado STEM network
  - Informal: Museum of Nature and Science, Space Foundation, Children's museum