Fremont Middle School

Roseburg School District

Grades 6, 7 & 8

Student Population: 700

SPED Population: 15.5%

SES: 55-60% Free & Reduced

Mobility: 12%

2 Administrators

37 Certified Staff

45 Classified Staff (9 Math Teachers)

Fremont Historical OAKS data 2003-2010

Year	2003-04	2004-05	2005-06 OMLI	2006-07 OMLI/BP	2007-08 OMLI/BP	2008-09 BP	2009-10 Studio/ BP
All students LA	40.6%	36.8%	36.6%	62%	69%	72.4%	78.4%
All students math	**29%**	**30.8 %**	**49.8%**	**56%**	**70%**	**76%**	**83.6%**
LA SPED	3.3%	6.5%	4.9%	18%	17%	27.8%	38.3%
Math SPED	**5.4%**	**13%**	**17.7%**	**20.9%**	**20.2%**	**30.3%**	**57%**

Improving Student Achievement: Where to Start

- Acknowledging a need for improvement.
- Learning and implementing new teaching strategies. We worked mostly with the Teachers Development Group (TDG) and the changes at Fremont reflect our work with the TDG.
- Changing our belief system, especially in regards to SPED students.

State Report Record 2012-13. Fremont earned a 5 overall putting us in the top 10% of middle schools in the state.

OREGON DEPARTMENT OF EDUCATION

2012-2013
Report Card Rating Details
Public Version - Final - October 10, 2013

District: Douglas County SD 4
School: John C Fremont Middle School

Overall school ratings are determined using the percent of points earned for each of the indicators below. Detailed data to support the indicator ratings are provided in the following pages.

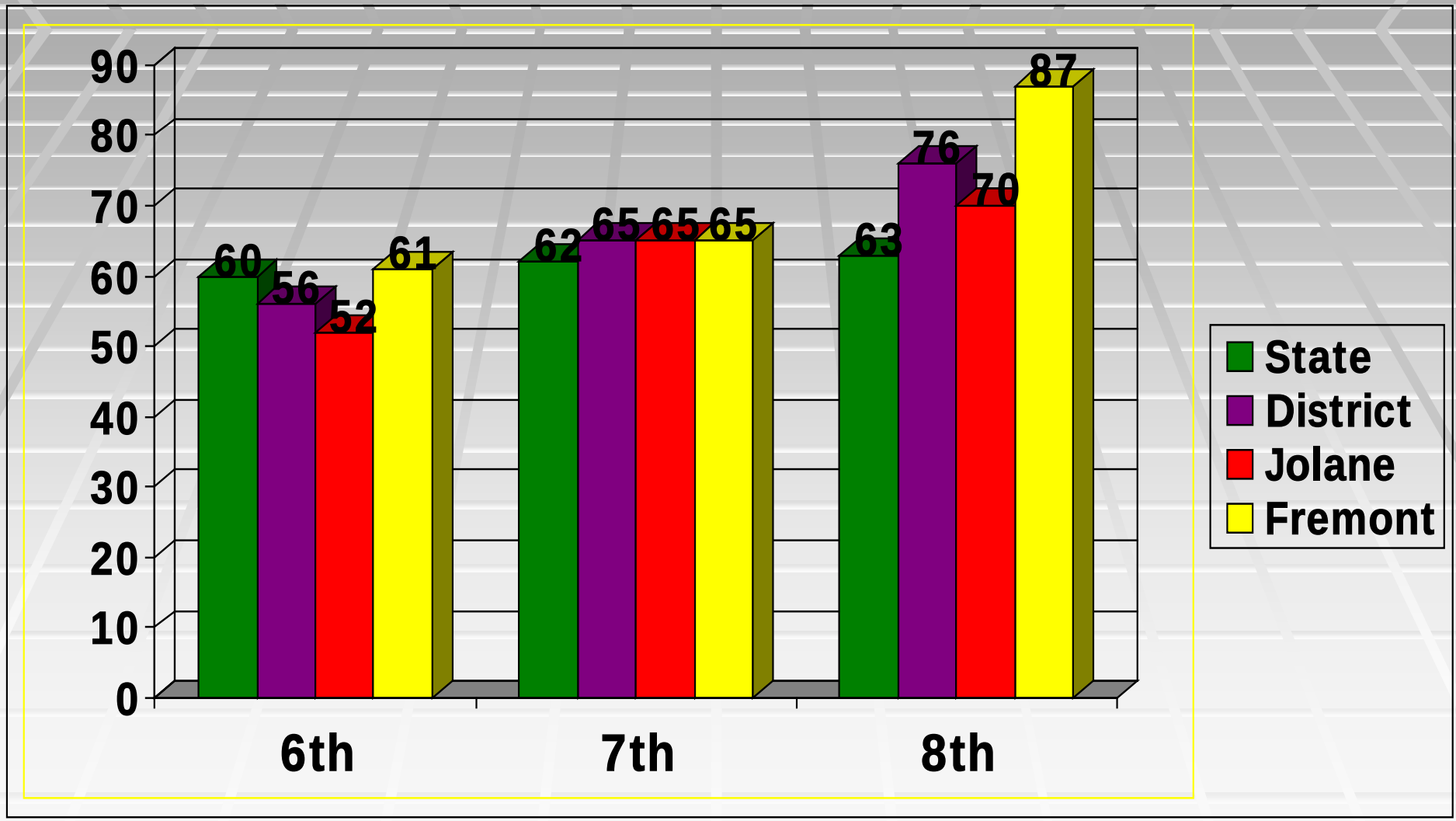
Academic Achievement (page 3)	Level	Points Earned	Points Eligible	
Reading (All Students)	Level 4	4	5	
Mathematics (All Students)	Level 4	4	5	
Total	**Level 4**	**8**	**10**	
Percent of Points Earned = Total Points Earned / Total Points Eligible				**80.0%**

Academic Growth (page 4)	Level	Points Earned	Points Eligible	
Reading (All Students)	Level 4	4	5	
Mathematics (All Students)	Level 5	5	5	
Total	**Level 5**	**9**	**10**	
Percent of Points Earned = Total Points Earned / Total Points Eligible				**90.0%**

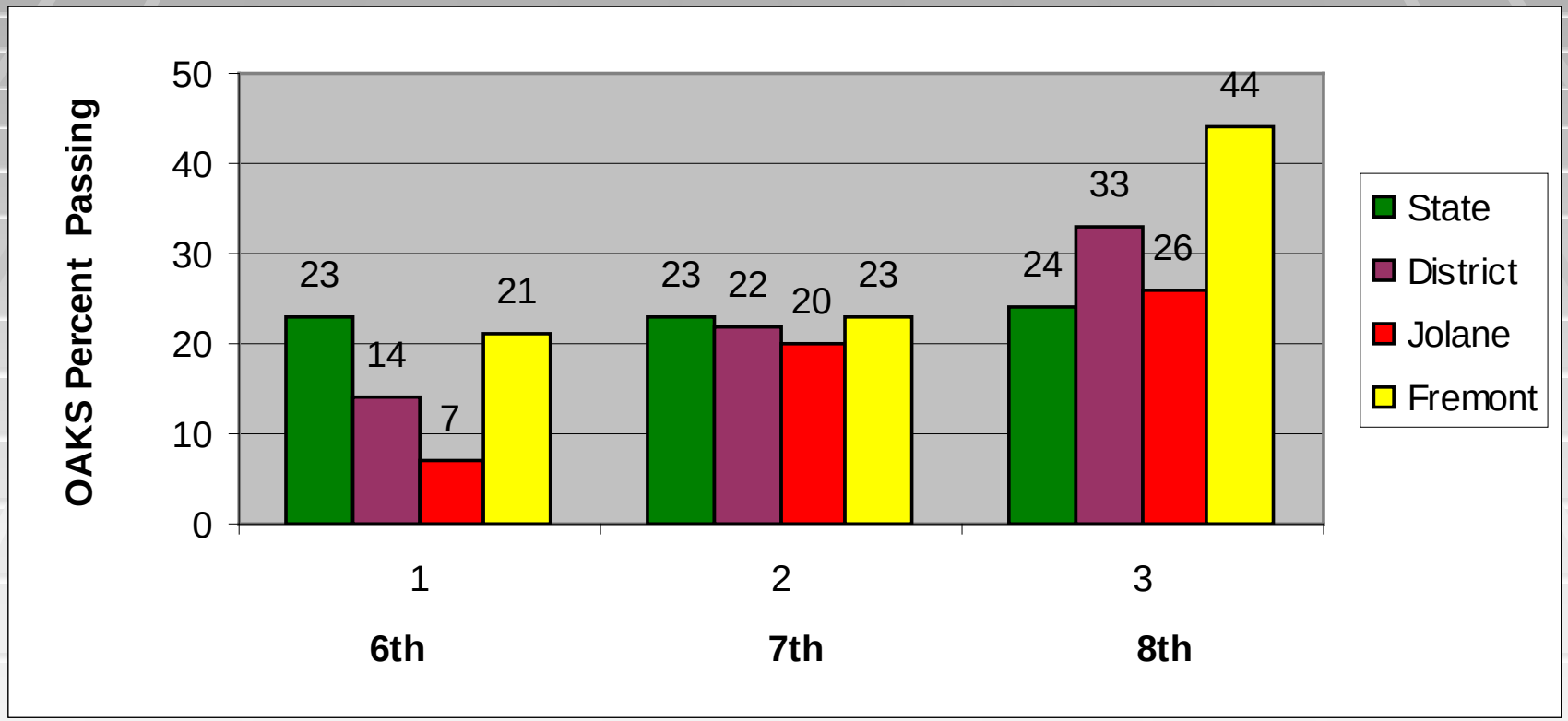
Subgroup Growth (page 5)	Level	Points Earned	Points Eligible	
Reading				
Economically Disadvantaged	Level 4	4	5	
English Learners	Not Rated	0	0	
Students with Disabilities	Level 4	4	5	
Underserved Races/Ethnicities[1]	Level 4	4	5	
Math				
Economically Disadvantaged	Level 5	5	5	
English Learners	Not Rated	0	0	
Students with Disabilities	Level 5	5	5	
Underserved Races/Ethnicities[1]	Level 5	5	5	
Total	**Level 5**	**27**	**30**	
Percent of Points Earned = Total Points Earned / Total Points Eligible				**90.0%**

Category Level Cutoffs	
Level	**% of Points Earned**
Level 5	**90.0%**
Level 4	**70.0%**
Level 3	**50.0%**
Level 2	**30.0%**
Level 1	**<30.0%**

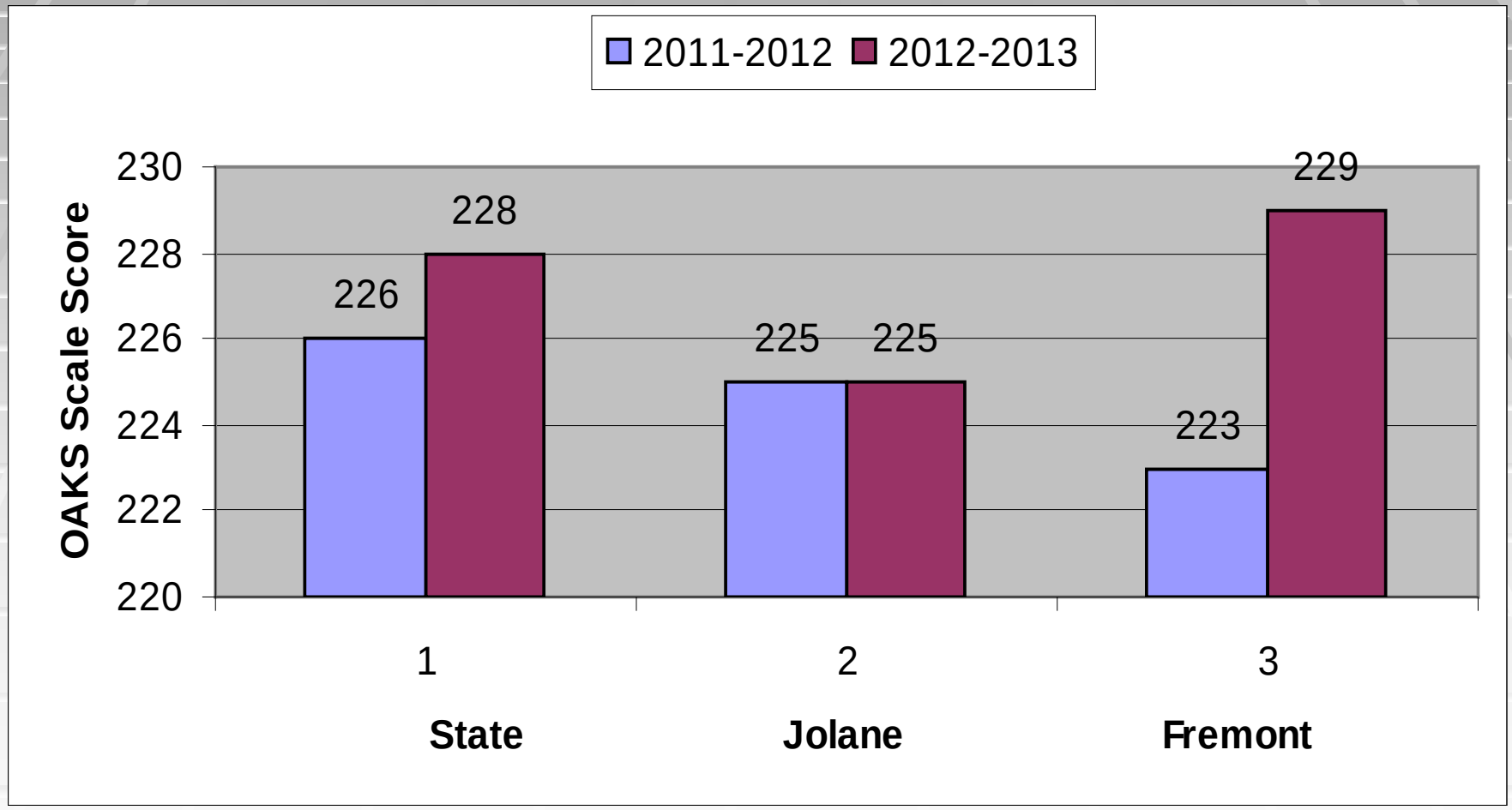
Grade Level OAKS Achievement Data 2012-2013



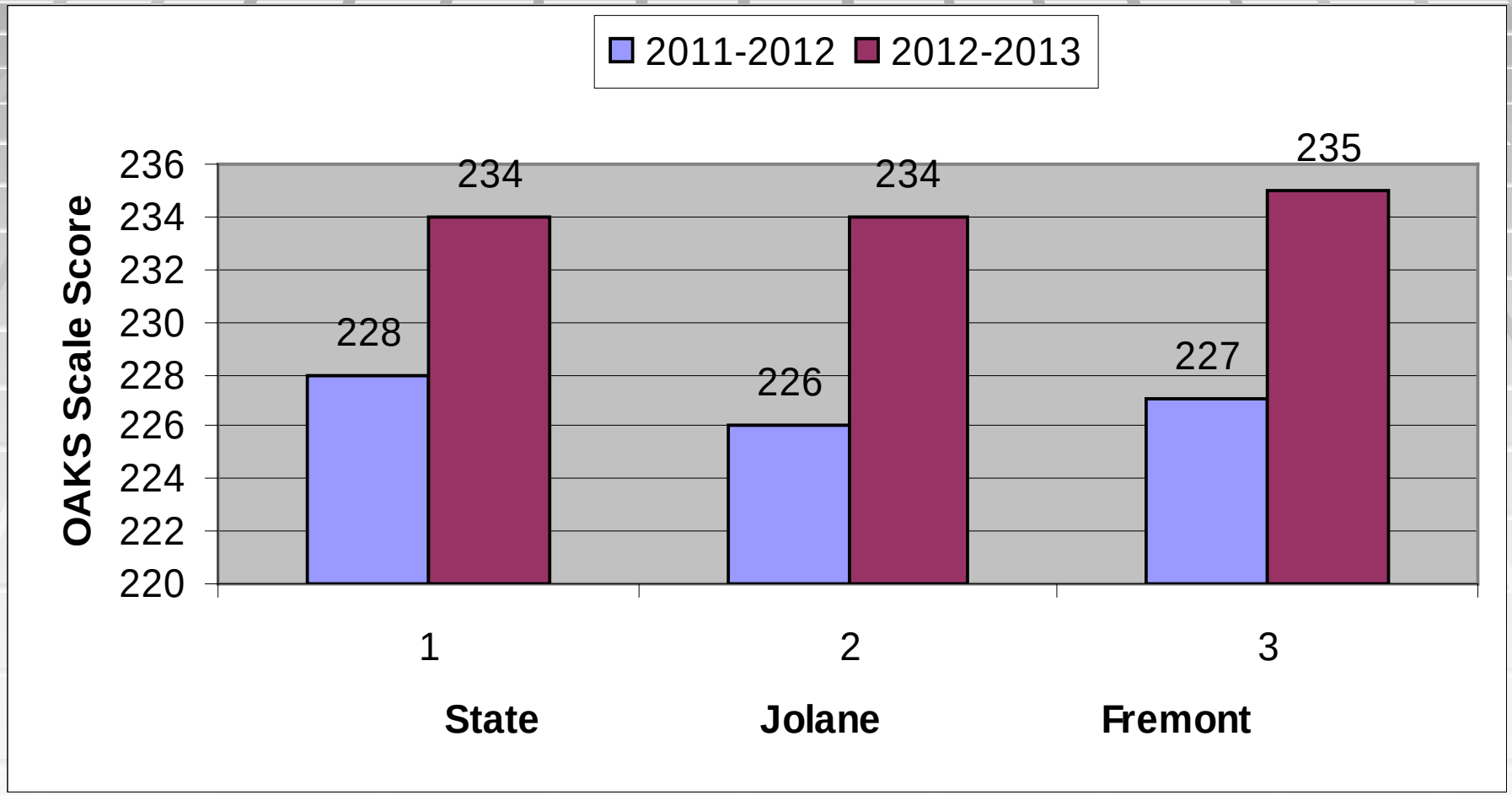
SPED Percent Passing by Grade Level 2012-2013.



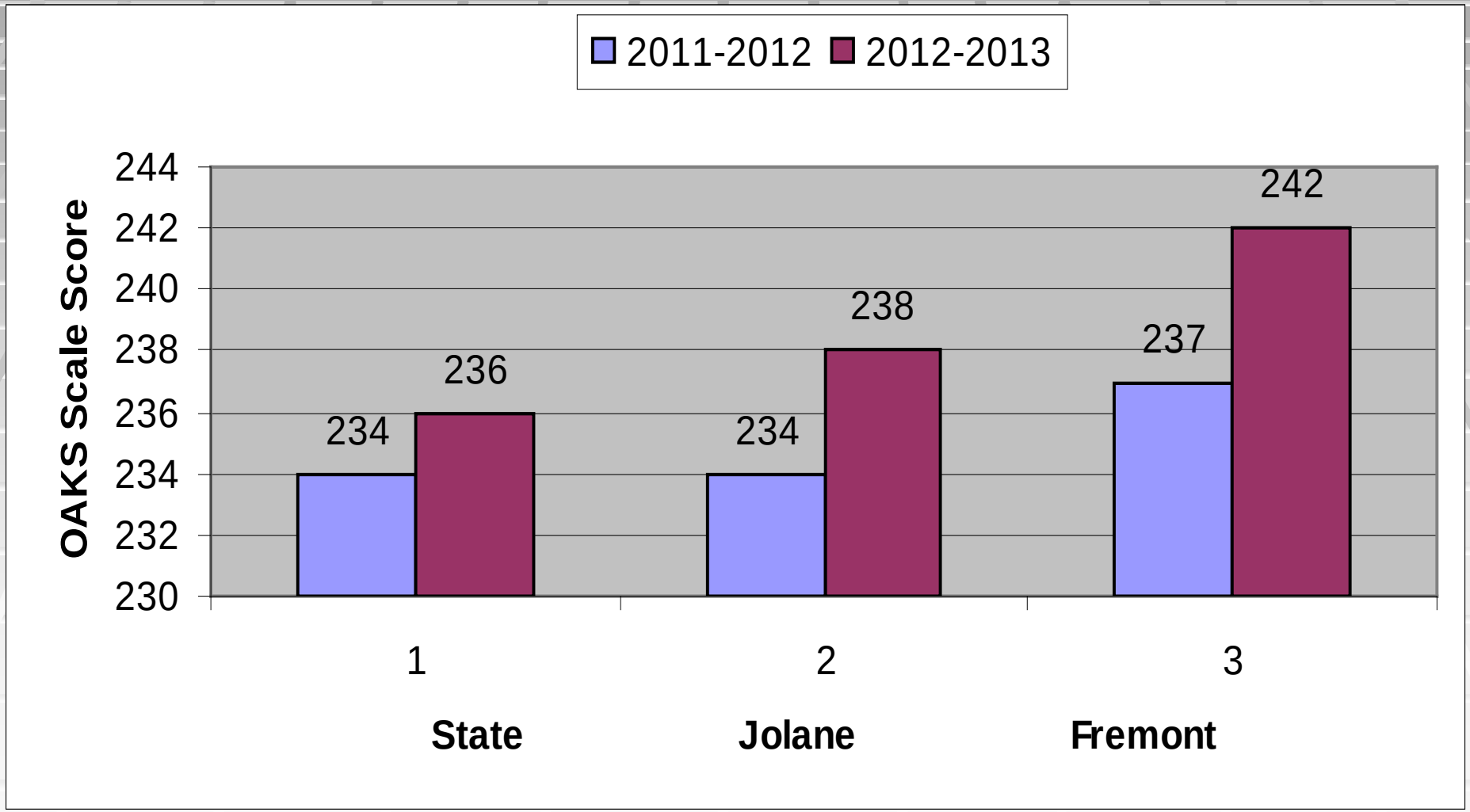
6th Grade OAKS Growth Scores



7th Grade OAKS Growth Scores



8th Grade OAKS Growth Scores



The big changes connected to improved student achievement and growth:

- Belief System: **Growth mindset**: all students can learn.
- **Best Practices**: It's how we teach math.
- **All students** in the core including SPED.
- **Support classes** for underachieving students taught by grade level teacher.
- Instruction in support classes focuses on supporting **grade level standards**.

Best Practices in Mathematics: The Big Ideas

- The focus of the mathematics is on sense-making, reasoning and understanding. (Not memorization).
- Use of worthwhile mathematical tasks.
- The mathematics is challenging for all students.
- Students are engaged in meaningful discourse that helps them make sense of and further their understanding of the important math concepts.

Mathematical Habits of Mind and Habits of Interaction (from Best Practices).

- The mathematical **Habits of Mind are how students make sense of the math**: seeing patterns and structures, multiple representations, connections between strategies, metacognition, and perseverence.
- The mathematical **Habits of Interaction are norms for how students should interact** around the mathematics: private reasoning time, explaining their thinking, listening to understand, asking genuine questions, using multiple pathways, comparing ideas and logic, critiquing and debating, and using math reasoning as the authority.
- The habits of mind and interaction are all embedded in the 8 CCSS math practices.

Best Practice = CCSSMP

- Best Practices is essentially the same as the 8 Common Core Standards for Mathematical Practices
  - 1. Make sense of problems and persevere in solving them.
  - 2. Reason abstractly and quantitatively.
  - 3. Construct viable arguments and critique the reasoning of others.
  - 4. Model with mathematics.
  - 5. Use appropriate tools strategically.
  - 6. Attend to precision.
  - 7. Look for and make use of structure.
  - 8. Look for and express regularity in repeated reasoning.

Mathematically Productive Teaching Routines aligned with Best Practices

- Questioning strategies that promote sense-making and understanding and bring out the important math concepts in the lesson.
- Structuring student discourse to ensure student interaction is productive and equitable.
- Selecting and sequencing student work to advance student understanding by fostering connections related to the core math ideas of the lesson.

Changes in our beliefs required changes in how we structured mathematics at Fremont.

Class Structure

- **Core classes** (grade level class). All students in all grades are in mixed ability core classes receiving instruction aligned to grade level standards.
- **Inclusion classes** - core class with IA support and a larger number of SPED students, 5-8.
- Depending upon need, SPED students who have an IEP in math are placed in a math inclusion class. If they have an IEP in LA they are placed in a LA inclusion class. Some students have both.
- Inclusion classes are not taught any differently than core classes. The teacher and IA monitor all students.
- SPED students might be strategically located in the classroom and strategically paired with another student. No students sit in a separate location or receive different instruction.

Support Classes

- All support classes are **in addition** to the core.
- Math support classes are taught by the grade level core teacher and focus on **supporting grade level standards** that are currently being taught in the core classes.
- Every math teacher teaches one support class.

Student placement in support classes.

- 6th grade is based upon OAKS scores.
- 7th and 8th grade is based upon teacher recommendation and OAKS scores.
- 7th and 8th grade students are placed in either math literacy (30 minute period) or math support (52 minute period) based upon need.
- Students have either the 30 minute reading literacy or math literacy. Only math teachers teach math literacy. All other teachers teach reading literacy.

Instruction and curriculum in support classes

- Best practices is used in all math classes including support classes.
- CMP is used in core classes.
- Support classes use mainly Math Navigators, some CMP and Number Worlds. Next year we will all use Core Focus on Math.
- Most support classes use a part of the time for homework support.

Next Steps (from 2012-2013)

- Start support classes for sixth grade students.
- Clarify the purpose and focus of support classes for underachieving students especially SPED students.
- Continue to work on deepening our understanding of the CCSS Mathematical Practices.
- Align lessons to the standards.

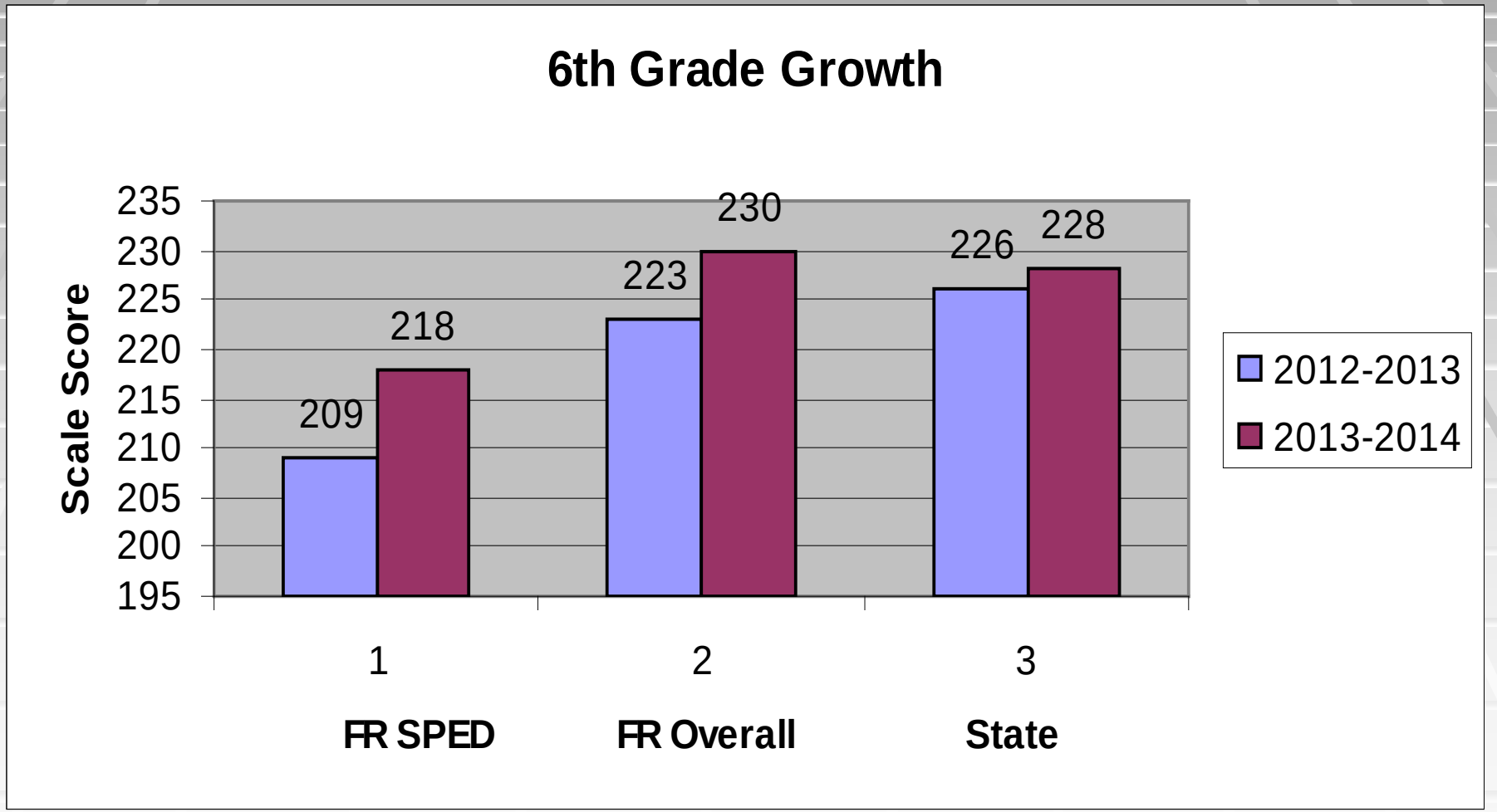
2013-2014 Math FOCUS

The purpose of our focus is to increase student understanding and achievement.

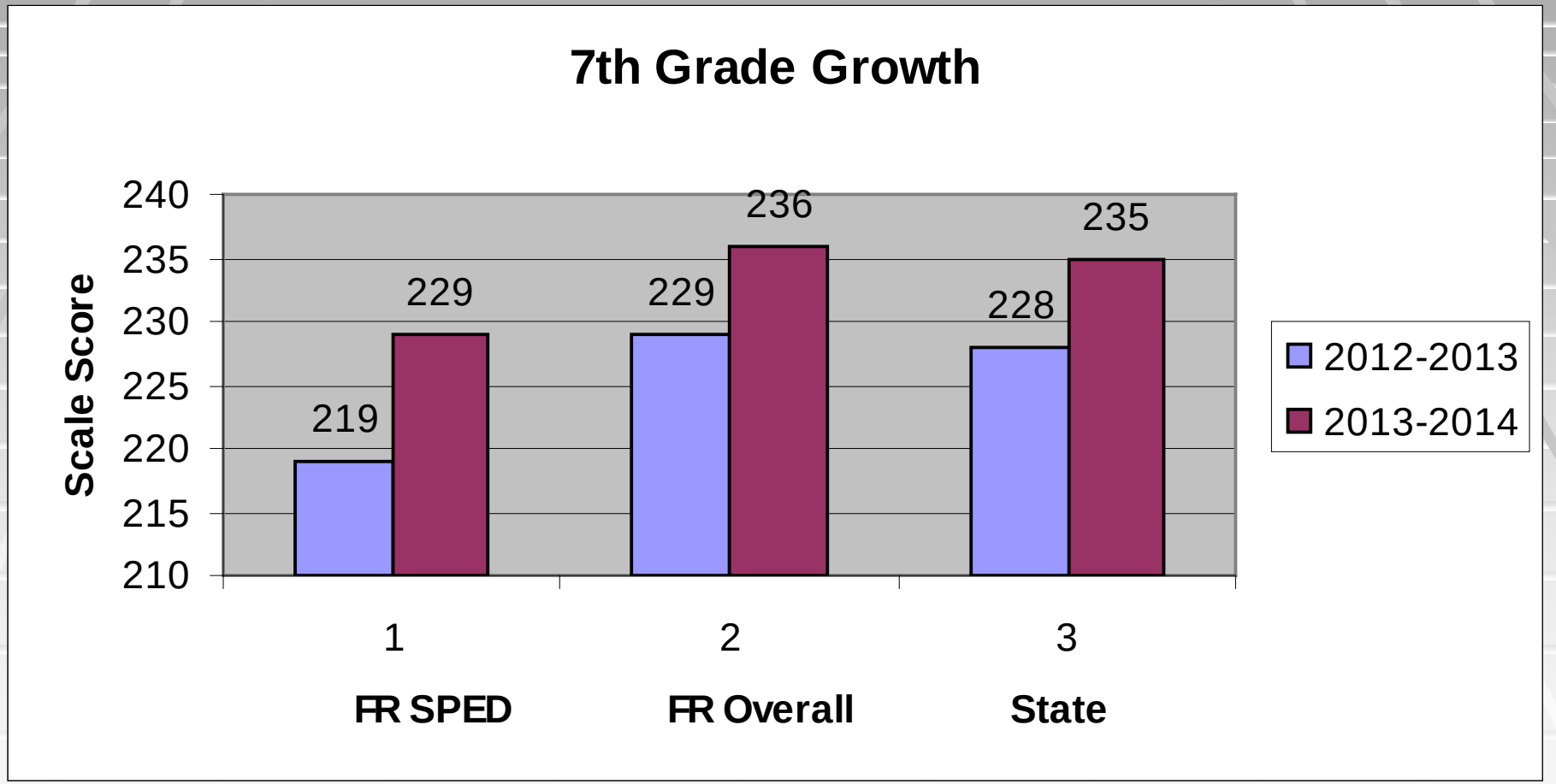
- Teaching focus:
  - CCSS Mathematical Practices
  - Growth Mindset
  - Mathematically productive teaching routines.

- Studio work that focused on our goals:
  - Connecting the Habits of Mind and Habits of Interaction to the CCSS Math Practices.
  - Deepening our understanding of CCSS math practices 1, 3, 6 and 8.
  - Modeling questioning strategies that promote conjectures and generalizations (MP 7 & 8).
  - Structuring student math talk and selecting and sequencing student work.

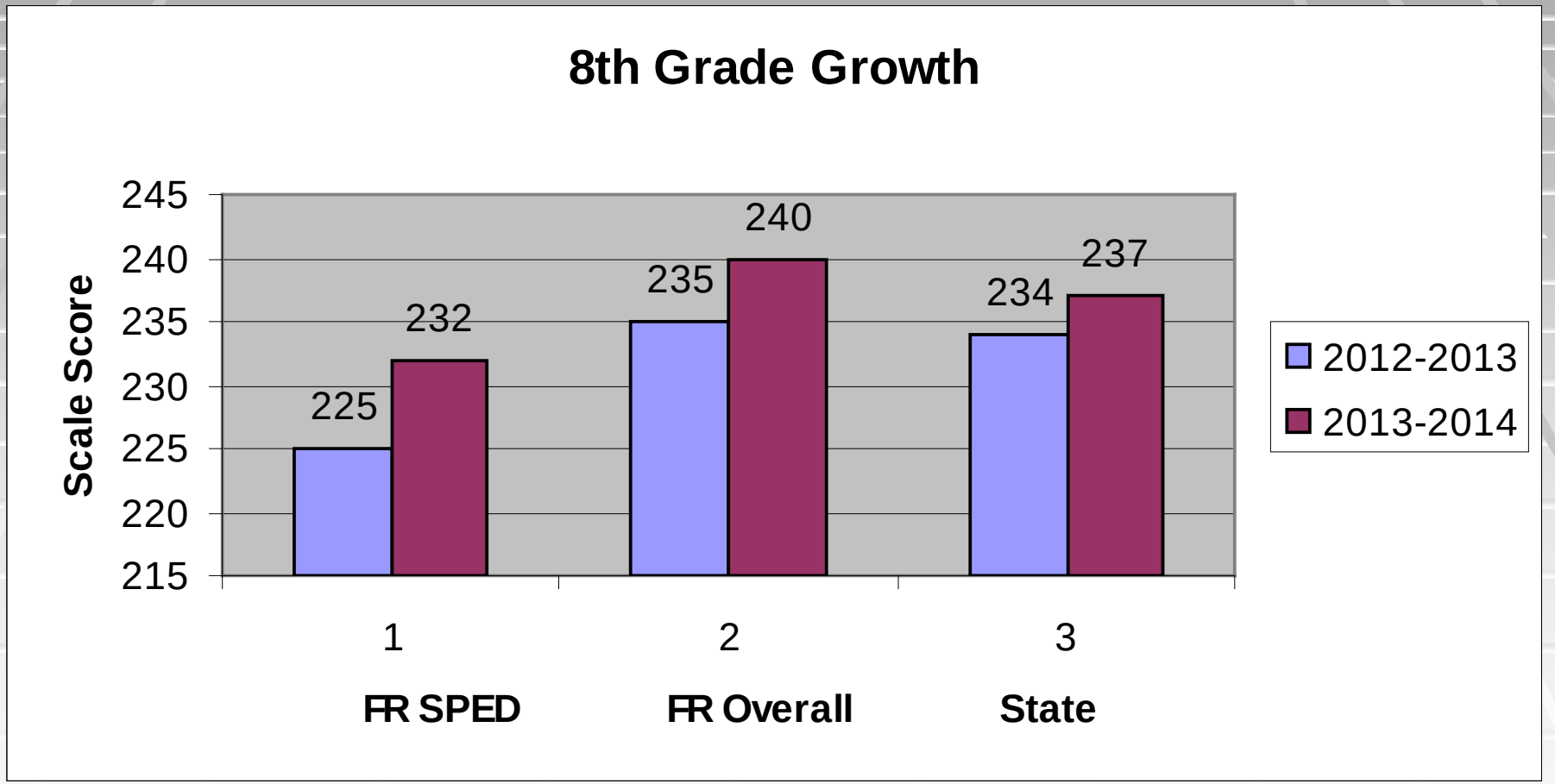
Student Growth for 2013-2014



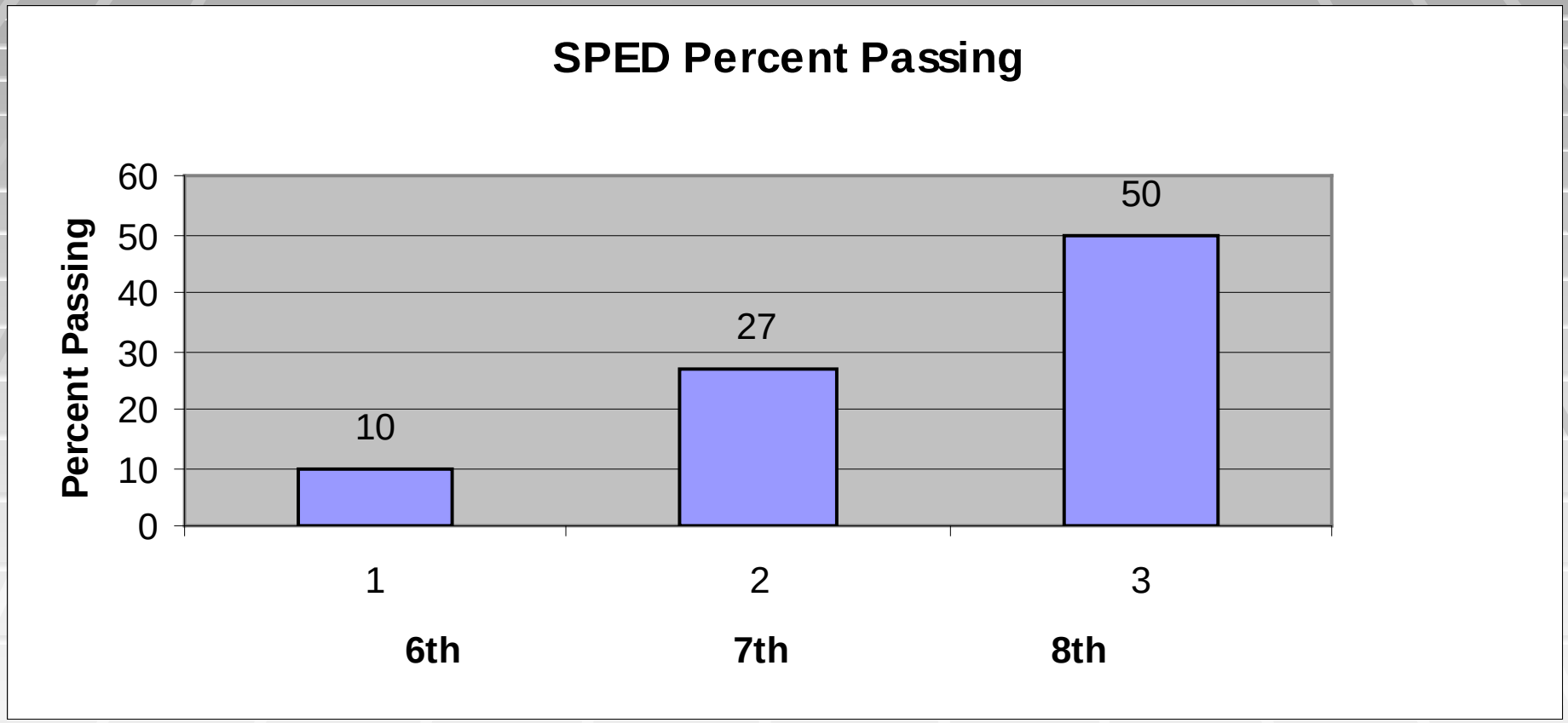
Student Growth for 2013-2014



Student Growth for 2013-2014



Subgroup Achievement Data 2013-2014



How to increase student understanding and achievement.

- Get a **Best Practices** course from TDG brought to your district.
- Change the class structure so all students are in the grade level core.
- Provide supports for underachieving students that are **aligned to grade level standards** and support the core.
- Do your own professional development centered around understanding and implementing the Common Core **Mathematical Practices**.

PD on the CCSS Math Practices

- Know the mathematical practices are all connected to each other and are not meant to be taught in isolation of one another in the classroom.
- It can be helpful if PD focuses on one or two related practices at time. 1 & 6, 2 & 3, 4 & 5, and 7 & 8 are related with practices 1 and 6 being the overarching habits of mind in mathematical thinking.

3 essential understandings teachers need to have to teach the mathematical practices (according to Deborah Ball).

- 1. Understand the practices are fundamental to learning the content.
- 2. Understand that all students can and must develop proficiency with the Mathematical Practices.
- 3. Teachers need mathematical knowledge for teaching the mathematical practices.

What we've done at Fremont to better understand the mathematical practices.

- Unpack the practices in detail. What do they mean? What do they look like in the classroom? How do we recognize when a lesson lends itself to a specific practice?
- Do the math we teach and discuss the practices used in the lesson.
- Watch lessons taught in each other's rooms and discuss the mathematical practices students are engaged in and the evidence to support our thinking.

Use studio classrooms to enhance your PD and understanding of the CCSS of mathematical practice.

- Studio is a full day PD that focuses on 1 or 2 mathematically productive teaching routines and 1 or 2 of the mathematical practices.
- Unpack the mathematical practices of focus for the lesson and discuss where and how students are likely to be engaged in the practice during the lesson.
- Examine the math lesson that will be taught, identify the core math idea, anticipate student answers and stuck points and discuss how to extend student thinking.
- Discuss the productive teaching routines that will be used in the lesson and the rationale for using those specific routines.
- Watch the lesson and record lots and lots of evidence.
- Debrief the lesson: analyze teacher moves and student work, discuss what worked in the lesson and changes we might make to the lesson to increase student understanding in the future.
- Set goals as a department to take what we are learning back into our classrooms.

Small Steps

- Identify one or two areas to focus on at a time.
- Don’t give up. Think long-term.
- Change takes hard work and time.
- Shared leadership.
- Support the department and hold them accountable.

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