



A Comprehensive Approach to Mathematics Program Improvement

Olympia School District
Presentation 2006

Introduction

- Eric McDowell
- K-12 Mathematics Curriculum
Developer, Bellevue School District
- 425.456.4043
- mcdowelle@bsd405.org

[Agenda]

1. Using tightly aligned curricula
2. Using data to measure progress
3. Using multiple measures
4. Making *all* kids advanced kids
5. A focus on continual improvement

[Using Tightly Aligned Curricula]

- Aligned to world-class standards
- Alignment needs to go down to at least the unit level (if not lower)
- We used the PROM/SE Standards and the MAP Standards from Achieve

[Using Tightly Aligned Curricula]

- Kindergarten Standard 1:
 - Count objects through 30 and use numbers to express quantity.

Using Tightly Aligned Curricula

- Neither side of those in the “math wars” have a lock on the truth (you don’t have to make a choice between reform and traditional mathematics – you really can and should have both)
- The Three Pillars of Mathematics:
 - Conceptual Understanding,
 - Procedural Skill, and
 - Problem-Solving Ability

[Using Data]

- All too often, the “math wars” are fought with anecdotes and talk of the “good old days” or “back to...”
- All too often, discussions about mathematics become emotional (especially with parents)
- The only way out is to have data – and you cannot have too much data

Using Multiple Measures

- WASL (grades 3, 4, 5, 6, 7, 8, 9, 10)
- ITBS (grades 3, 6, 9)
- SAT (grades 11, 12)
- PSAT (grade 9, 10)
- PLAN (grade 10)
- AP & IB (grades 9, 10, 11, 12)
- COMPASS (grades 11, 12)
- TIMSS & Advanced TIMSS (grades 3 – 12)

Using Multiple Measures: The WASL Test 2006

Enrolled in	Number of sophomores	% passing the WASL math
IAG1 (your Alg. 1)	119	62%
IAG2 & HIAG2 (your Geo.)	431	62%
IAT3 & HIAT3 (your Alg2/Trig)	778	88%
IAP4 & HIAP4 (Pre-calc)	220	90%
Calculus (AP, intro, IB HL/SL)	28	100%
AP Stats	17	100%

Using Multiple Measures: The COMPASS Test

Enrolled in	Number of students	% placing in college level math
Calculus (Adv, AP, IB SL/HL, Intro)	340	98.5%
Honors Pre-calculus	384	81.5%
AP Stats	186	74.2%
Honors Trig	64	31.3%
Regular Pre-calculus	114	29.8%
All other courses (IAG1, IAG2, IAT3, HIAG2, IB Studies)	380	8.6%

Making all kids “advanced” kids

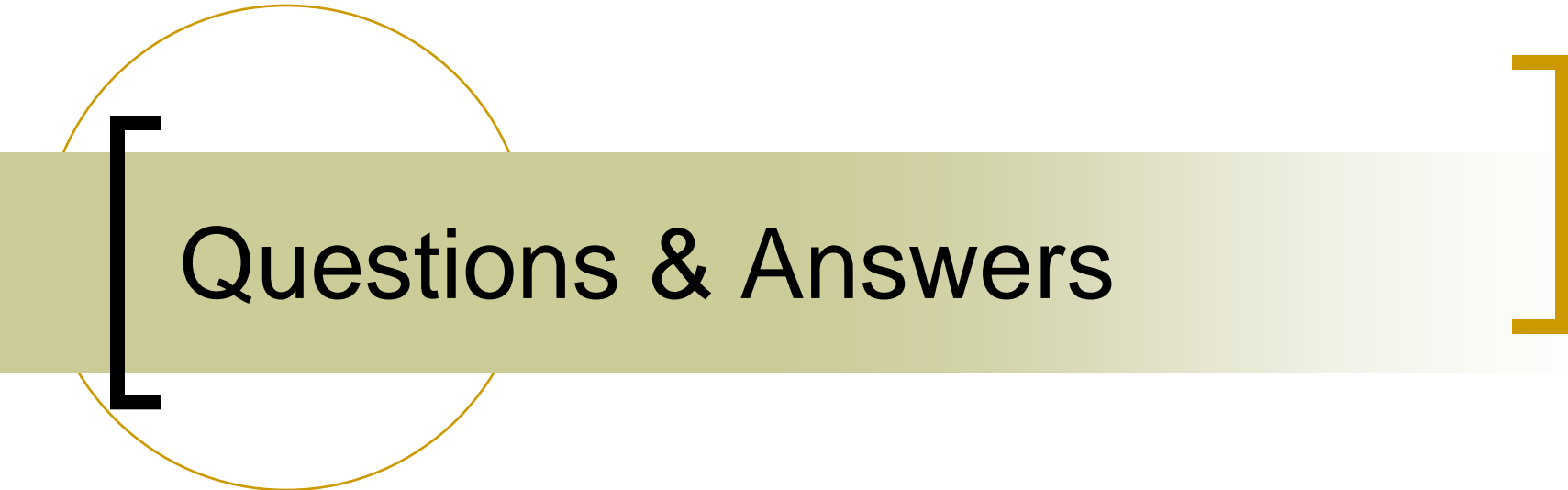
- Remove the entrance requirements (i.e. the barriers) to “honors” classes
- Overall AP/IB tests over the years:
 - Test year # AP/IB Tests
 - 1996 259
 - 1997 308
 - 1998 572
 - 1999 1117
 - 2000 1439
 - 2001 1858
 - 2002 3047
 - 2003 3178
 - 2004 3323
 - 2005 3760
 - 2006 4476 (5691 if you include IB and kids past AP/IB)

Making all kids “advanced” kids

- Remove the entrance requirements (i.e. the barriers) to “honors” classes
- **Math** AP tests over the years (these are AP only – IB not included):
 - Test year # AP tests
 - 1996 91
 - 1997 112
 - 1998 138
 - 1999 254
 - 2000 309
 - 2001 381
 - 2002 454
 - 2003 546
 - 2004 552
 - 2005 577
 - 2006 733 (1014 if you include IB and kids past AP)

A focus on continual improvement...

- Improving a mathematics program (or any program) is a process that will never end – with patience and persistence being key assets
- Next Steps in Bellevue:
 - Common math assessments and rubrics across all grades and courses K-12
 - Math-Science Alignment Project



Questions & Answers

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