

Making the Whole-School CAS Commitment

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Questions?

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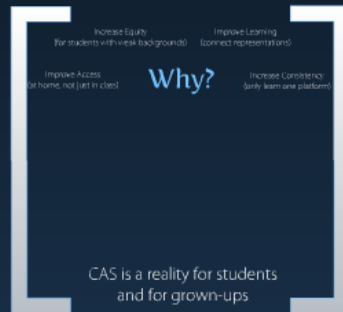
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Find this presentation at
<http://bit.ly/wps21-1pc>

[Who? When? Why? How? So What?]



Of course, there were some hitches



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[Who? When? Why? How? So What?]

Who?

Walter Payton

- Urban, selective public school
- 850 students; 8 math teachers
- 35% free/reduced lunch
- Algebra I through post-Calculus
- Technology prevalent

Glenbrook South

- Suburban public school
- 2600 students; 25 math teachers
- 15% free/reduced lunch
- Pre-Algebra through post-Calculus
- Technology prevalent

New Trier

- Suburban public school
- 4200 students; 46 math teachers
- <5% free/reduced lunch
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When?

1990s

- Graphing (TI 81/82)
- CAS (TI 8 and loan
- Mathem class set
- CAS legal Exam fro

When?

1990s

- Graphing calculators for all (TI 81/82/83/84 & 85/86)
- CAS (TI 89/92) available and loaned to teachers
- Mathematica/Maple & class sets of CAS
- CAS legal on Calculus AP Exam from mid-'90s

2000

- WPCP opens; loans TI-83s like textbooks

2002

- TI-89s used in AP Calculus
- WPCP uses TI-89 in Precalculus

2003

2006

- Nspire+CAS previewed at UCSMP; incorporated into CME, UCSMP, and other texts.
- Nspire+CAS piloted in PC/Stats at GBS
- New Trier Precalc adopts CAS

2008

- Schools take the plunge: general students required to buy & use Nspire+CAS

2010

- Ongoing professional development and conversations

2011

- ACT/CAS Study
- Nspire Navigator

1990s

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- School plunges into student buy &

2008

2010

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CAS piloted in
at GBS
Precalc
CAS

- Schools take the plunge: general students required to buy & use Nspire+CAS

- Ongoing professional development and conversational

2010

Teachers take the
state: general
standards required to
use Nspire+CAS

- Ongoing professional development and conversations

2011

- ACT/CAS Standards
- Nspire Navigator

Increase Equity
(for students with weak backgrounds)

Improve Learning
(connect representations)

Improve Access
(at home, not just in class)

Why?

Increase Consistency
(only learn one platform)

Increase Equity
(for students with weak backgrounds)

Improve Learning
(connect representations)

Improve Access
(at home, not just in class)

Why?

Increase Consistency
(only learn one platform)

CAS is a reality for students
and for grown-ups

How?

WPCP: Cold Turkey

- "We can't take it anymore!"
- Nonterminal students required to have Nspires; terminal students loaned TI-89s
- 200+ Nspires bought for students on free/reduced lunch; "strict liability" for lost, stolen, damaged calculators
- PD from Texas Instruments for math
- 2010: school to sell Nspires to frosh

Glenbrook South: Incremental Adoption

- Start with incoming frosh courses
- Implementation moves with students
- Loaner program for students with financial need
- Calculators sold in school store
- PD & Curriculum Development in summer, academic year
- Graphing Calculator Buyback

New Trier: Top-Down Phasing

- Gradual adoption in upper-level courses
- 5/09: everyone must have CAS
- Teachers paid to develop curriculum over summer
- PD in June, July, August (ongoing)
- Calculators sold in school store
- 150 calcs loaned via rewards program
- Used GBS ideas to smooth implementation

Of course, there were some hitches

WPCP: Cold Turkey

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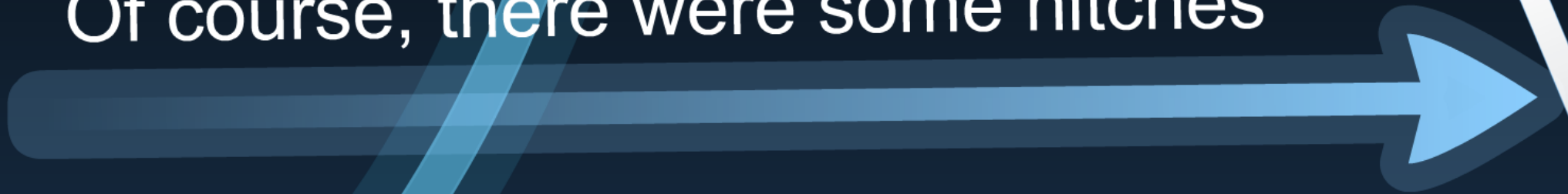
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Of course

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Hitches

- Getting the department on board
- Calculator availability
- Transition costs
- State Testing
- Revising course expectations
- Academic Honesty

So what?

What's the use of Algebra?

Expressing ideas

Making arguments

Interpreting (equivalent) expressions

CAS is not always the right or best way to attack a problem.

CAS requires symbol sense.

Algebra becomes a theme

CAS reinforces good notation

CAS brings up questions "out of order"

CAS empowers students to ask and answer questions with algebra

What's the use of Algebra?

Expressing ideas

Making arguments

Interpreting (equivalent) expressions

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Math!

Algebra becomes a theme

CAS reinforces good notation

CAS brings up questions "out of order"

CAS empowers students to ask and answer questions with algebra

AND

We're still learning

What we assess and how.

What just happened?

What the machines can do.

Questions?

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