## Trends and Issues in High School Scheduling

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## Agenda

- Introduction
- A Brief History of High School Scheduling
- Analyzing and Comparing the Most Common High School Scheduling Formats
- Single Period Models
- Block and Combination Block/Period Models
- The Intervention/Enrichment Period
- Using Time to Meet the Needs of Students
- Staff Development Needs
$\square$ Recommendations for Successful Implementation


## Summary of the Scheduling Trends in Virginia High Schools

 1994-2006Single Period Schedule Trends

|  | $\begin{gathered} 1994- \\ 95 \end{gathered}$ | $\begin{gathered} 1995- \\ 96 \end{gathered}$ | $\begin{gathered} 1996- \\ 97 \end{gathered}$ | $\begin{gathered} 1997- \\ 98 \end{gathered}$ | $\begin{gathered} \text { 1998- } \\ 99 \end{gathered}$ | $\begin{gathered} 1999- \\ 00 \end{gathered}$ | $\begin{array}{\|c} \hline 2000- \\ 01 \\ \hline \end{array}$ | $\begin{gathered} \text { 2001- } \\ 02 \end{gathered}$ | $\begin{gathered} 2002- \\ 2003 \end{gathered}$ | $\begin{gathered} 2003- \\ 2004 \end{gathered}$ | $\begin{gathered} 2004- \\ 2005 \end{gathered}$ | $\begin{gathered} 2005- \\ 2006 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underset{\text { period }}{6}$ | 55 | 52 | 42 | 35 | 24 | 12 | 9 | 6 | 7 | 8 | 8 | 6 |
| $\begin{gathered} 7 \\ \text { period } \end{gathered}$ | 133 | 104 | 79 | 72 | 69 | 74 | 70 | 66 | 64 | 66 | 66 | 60 |
| $\begin{gathered} 8 \\ \text { period } \end{gathered}$ | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 191 | 156 | 121 | 107 | 93 | 86 | 79 | 72 | 71 | 74 | 74 | 66 |

Block Scheduling Trends

|  | $1994-$ <br> 95 | $1995-$ <br> 96 | $1996-$ <br> 97 | $1997-$ <br> 98 | $1998-$ <br> 99 | $1999-$ <br> 00 | $2000-$ <br> 01 | $2001-$ <br> 02 | $2002-$ <br> 2003 | $2003-$ <br> 2004 | $2004-$ <br> 2005 | $2005-$ <br> 2006 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 A/B | 16 | 13 | 12 | 14 | 7 | 5 | 6 | 6 | 7 | 7 | 0 | 0 |
| 7 A/B | 39 | 52 | 69 | 74 | 86 | 82 | 90 | 92 | 89 | 89 | 94 | 89 |
| 8 A/B | 10 | 6 | 8 | 10 | 11 | 22 | 27 | 31 | 34 | 38 | 42 | 58 |
| $4 \times 4$ | 28 | 58 | 78 | 84 | 93 | 97 | 94 | 95 | 100 | 97 | 93 | 95 |
| Other | 4 | 5 | 4 | 5 | 5 | 6 | 6 | 6 | 2 | 3 | 3 | 3 |
| Total | 97 | 134 | 171 | 187 | 202 | 212 | 223 | 230 | 232 | 234 | 232 | 245 |

## Factors Influencing Achievement

| School | Opportunity to learn <br> Time <br> Monitoring <br> Pressure to achieve <br> Parent involvement <br> School climate <br> Leadership <br> Cooperation |
| :--- | :--- |
| Teacher | Instruction <br> Curriculum design <br> Planning |
| Student | Home atmosphere <br> Prior knowledge <br> Aptitude <br> Interest |


| Factor | Avg. ES | Percentile <br> Gain |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Opportunity to <br> Learn | .88 | 31 |  |  |
| Time | .39 | 15 |  |  |
| Monitoring | .30 | 12 |  |  |
| Pressure to achieve | .27 | 11 |  |  |
| Parental <br> involvement | .26 | 10 |  |  |
| School climate | .22 | 8 |  |  |
| Leadership | .10 | 4 |  |  |
| Cooperation | .06 | 2 |  |  |
|  |  |  |  | Marzano, 2003 |

"We should strive for a school schedule that is flexible enough to provide more learning time for students who need it and more choices for those who don't need more learning time.
"If all you're going to do is dispense information to kids, I don't need you. I can get that done cheaper and better on-line. On the other hand if you are willing to teach, coach, assess, reteach, re-test, and generally help students to be successful, maybe we still can do business."
Comment made to a teacher by a superintendent in Ohio.

## Criteria for Comparison of Schedules

- Time per course
- Choices available
$\square$ Cost
$\square$ Student Load
- Teacher Load
- Percentage of Core (assuming 1 class (period or block) of E,M,SS, and SC per year)
$\square$ Meeting format: daily (yearlong), every-other-day (yearlong), daily (semester)


## 6-Period Day (Lunch Built Around Periods)

| Period 1 |  |
| :---: | :---: |
| Period 2 | - Choices available-6 |
| Period 3 | - Cost Factor- 5/6 (83\%) |
| Period 4 | - Student Load-6 |
| Period 5 |  |
| Period 6 | - Meeting format: daily- |

## 6-Period Advantages

- Daily meeting
$\square$ Total time per course-More than all but 6 A/B
$\square$ Percentage of core- $67 \%$ is more than all others and equivalent to the $6 \mathrm{~A} / \mathrm{B}$
- Cost- Same as 6 A/B; more than $6 / 7$ or $7 / 8$; less than all others.


## 7-Period Day (Lunch Built Around Periods)

| Period 1 |
| :---: |
| Period 2 |
| Period 3 |
| Period 4 |
| Period 5 |
| Period 6 |
| Period 7 |

- Time per course-48 x 180
- Choices available-7
- Cost Factor- 5/7 (71\%), 6/7 (86\%)
- Student Load-7
- Teacher Load-5 or 6
- Percentage Core: 57\%
- Meeting format: dailyyearlong


## 7- Period Advantages

- Daily meeting
- Total time per course (less than 6-period, $6 \mathrm{~A} / \mathrm{B}$ and $7 \mathrm{~A} / \mathrm{B}$; more than 8 -period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4
$\square$ Percentage of core (less than 6-period and $6 \mathrm{~A} / \mathrm{B}$; more than 8 -period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$ and Hybrid 4X4)
$\square$ Choice (one more than 6-period; one less than 8period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4)


## 8-Period Day (Lunch is a Period)

| Period 1 |
| :---: |
| Period 2 |
| Period 3 |
| Period 4L |
| Period 5L |
| Period 6L |
| Period 7 |
| Period 8 |

- Time per course-46 x 180
- Choices available-7
- Cost Factor- 5/7 (71\%), 6/7 (86\%)
- Student Load-7
- Teacher Load-5 or 6
- Percentage Core: 57\%
- Meeting format: dailyyearlong


## 8 Period (Lunch is a Period) Advantages

- Daily meeting
$\square$ Total time per course (less than 6 period, 7 period, 8 period (w/30 min. lunch), $6 \mathrm{~A} / \mathrm{B}$, and $7 \mathrm{~A} / \mathrm{B}$; more than $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4
$\square$ Percentage of core (less than 6 period and 6 A/B; more than 8 period, 8 A/B, 4X4 and Hybrid 4X4)
$\square$ Choice (one more than 6-period; one less than 8period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4)
$\square$ Scheduling ease (8 slots for singletons)


## 8-Period Day (Lunch Built Around Periods)

| Period 1 |
| :---: |
| Period 2 |
| Period 3 |
| Period 4 |
| Period 5 |
| Period 6 |
| Period 7 |
| Period 8 |

- Time per course-43 x 180
- Choices available-8
- Cost Factor- 5/8 (62.5\%), 6/8 (75\%), 7/8 (87.5\%)
- Student Load-8
$\square$ Teacher Load-5, 6, or 7
- Percentage Core: 50\%
- Meeting format: dailyyearlong


## 8 Period (Lunch Built Around Periods)

 Advantages- Daily meeting
- Choice (Same as $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4; more than all others.)
$\square$ Flexibility for double-dosing
- Guaranteed lunch


## 9-Period Day

| Period 1 |
| :---: |
| Period 2 |
| Period 3 |
| Period 4L |
| Period 5L |
| Period 6L |
| Period 7 |
| Period 8 |
| Period 9 |

- Time per course-40 x 180
- Choices available-8
- Cost Factor- 5/8 (62.5\%), 6/8 (75\%), 7/8 (87.5\%)
- Student Load-8
- Teacher Load-5, 6, or 7
- Percentage Core: 50\%
- Meeting format: dailyyearlong


## 9 Period (Lunch is a Period) Advantages

- Daily meeting
$\square$ Choice (Same as $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4; more than all others.)
- Flexibility for double-dosing
$\square$ Ease of scheduling ( 9 slots for singletons)


## Science Lab Options in Single-Period Schedules: Teacher Schedule

| Period 1 | Chem. S1 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Period 2 | D1 Lab. S1 | Plan | D3 Lab. S2 | Plan |
| Period 2 | Chem. S2 |  |  |  |
| Period 4L | Plan |  |  |  |
| Period 5L | Lunch |  |  |  |
| Period 6L | Chem. S3 |  |  |  |
| Period 7 | Plan | D2 Lab. <br> S3 | Plan | D4 Lab. |
| S4 |  |  |  |  |
| Period 8 | Chem. S4 |  |  |  |

## Science Lab Options in Single-Period Schedules: Student Schedule

| Period 1 | Chemistry |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Period 2 | D1 CH. | D2 PE | D3 Study | D4 PE |
| Period 2 | Math Analysis |  |  |  |
| Period 4L | U.S. History |  |  |  |
| Period 5L | Lunch |  |  |  |
| Period 6L | English 11 |  |  |  |
| Period 7 | Wind Ensemble |  |  |  |
| Period 8 | Spanish 4 |  |  |  |

## How many periods?

$$
\begin{gathered}
6,7,8,9 \\
10 ? ? ?
\end{gathered}
$$

## Why Have Schools Moved to Block Schedules?

- To allow/encourage teaching in depth and higher level thinking skills,
- To maintain/expand choice in the face of increasing core credit requirements for graduation,
- To permit more (or less time) for students to attain high levels of mastery on state accountability tests,
- To improve school management, and/or
$\square$ To reduce stress, for both students and teachers, yet still offer a broad and rigorous curriculum.


## What mistakes have some schools made when implementing block schedules?

- The use of a flawed decision-making process to adopt a block schedule.
- Poor preparation for teaching in the block, including insufficient staff development and/or inattention to course pacing.
- Unclear goals, over-promising or not meeting promises made.
$\square$ Poor scheduling decisions in the adoption phase.
- Budgetary concerns.
- The lack of a rigorous formal evaluation.


## 6 A/B Schedule

|  | A Day | B Day |
| :--- | :---: | :---: |
| Block 1 | Class 1 | Class 2 |
| Block 2 | Class 3 | Class 4 |
| Block 3 | Class 5 | Class 6 |

- Time per course-119 x 90
- Choices available-6
- Cost Factor- 5/6 (83\%)
- Student Load-6
- Teacher Load-5
- Percentage Core: 67\%
- Meeting format: E-O-D-yearlong


## 6-A/B Advantages

- Total time per course-More than all other schedules listed.
$\square$ Percentage of core-67\% is more than all others and equivalent to the 6-period.
- Cost- Same as 6 period; more than $6 / 7$ or 7/8; less than all others.


## 7 A/B Schedule (Atlee High School)

|  | M | T | W | R | F |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Block 1 (100) | 1 | 2 | 1 | 2 | 1 |
|  |  |  |  |  | 2 |
| $\begin{gathered} \text { Block } 2 \\ (100) \end{gathered}$ | 3 | 4 | 3 | 4 | 3 |
|  |  |  |  |  | 4 |
| Block 3 | 5 and | 5 and | 5 and | 5 and | 5 and |
| $\begin{gathered} \text { Block } 4 \\ (100) \end{gathered}$ | 7 | 6 | 7 | 6 | 6 |
|  |  |  |  |  | 7 |

- Time per course-100 x 90 or 50 X 180
- Choices available-7
- Cost Factor- 5/7
(71\%), 6/7 (86\%)
- Student Load-7
- Teacher Load-5 or 6
- Percentage Core: 57\%
- Meeting format: E-O-D yearlong or daily-yearlong


## 7- A/B Advantages

- Total time per course (less than 6-period and $6 \mathrm{~A} /$ B; more than 7-Period, 8 -period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4)
- Percentage of core (same as 7-period, less than 6period and $6 \mathrm{~A} / \mathrm{B}$; more than 8 -period, $8 \mathrm{~A} / \mathrm{B}$, 4X4, and Hybrid 4X4)
$\square$ Choice (one more than 6-period; one less than 8period, $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Hybrid 4X4)
$\square$ Daily student load
$\square$ Daily teacher load


## 8 A/B Schedule

|  | A Day | B Day |
| :--- | :---: | :---: |
| Block 1 | Class 1 | Class 2 |
| Block 2 | Class 3 | Class 4 |
| Block 3 | Class 5 | Class 6 |
| Block 4 | Class 7 | Class 8 |

- Time per course-88 x 90
- Choices available-8
- Cost Factor- 5/8 (62.5\%), 6/8 (75\%), 7/8 (87.5\%)
- Student Load-8
- Teacher Load-5, 6, or 7
- Percentage Core: 50\%
- Meeting format: E-O-D-yearlong


## 8 A/B Block and Single Period Hybrid Schedule

|  | M | T | W | TH | F |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Period 1 | Class 1 | Class 1 | Class 1 | Class 2 | Class 1 |
| Period 2 | Class 2 | Class 2 |  |  | Class 2 |
| Period 3 | Class 3 | Class 3 | Class 3 | Class 4 | Class 3 |
| Period 4 | Class 4 | Class 4 |  |  | Class 4 |
| Period 5 | Class 5 | Class 5 | Class 5 | Class 6 | Class 5 |
| Period 6 | Class 6 | Class 6 |  |  | Class 6 |
| Period 7 | Class 7 | Class 7 | Class 7 | Class 8 | Class 7 |
| Period 8 | Class 8 | Class 8 |  |  | Class 8 |

## 8 A/B Block and Single Period Hybrid Schedule (4-day block)

|  | M | T | W | TH | F |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Period 1 | Class 1 | Class 1 | Class 2 | Class 1 | Class 2 |
| Period 2 | Class 2 |  |  |  |  |
| Period 3 | Class 3 | Class 3 | Class 4 | Class 3 | Class 4 |
| Period 4 | Class 4 |  |  |  |  |
| Period 5 | Class 5 | Class 5 | Class 6 | Class 5 | Class 6 |
| Period 6 | Class 6 |  |  |  |  |
| Period 7 | Class 7 | Class 7 | Class 8 | Class 7 | Class 8 |
| Period 8 | Class 8 |  |  |  |  |

## Benefits of the Alternate day Block Schedule

$\square$ Longer classes encourage teaching with a variety of instructional models.

- Fewer "start-ups" and "endings" result in more useable instructional time.
- Fewer class changes improve school climate, discipline, and cleanliness.
- Because teachers see fewer students daily they know students better and are able to give more individual assistance.
- Compared to every day models, students have fewer classes, quizzes, tests, and homework assignments on any one day.


## Issues to Be Addressed in the Alternate Day Block Schedule

- Attention Span
- Teacher planning
- Lunch periods
- Absences
$\square$ Review
- "Sink time"
- To float or not to float
- Equalizing students' load

Block vs. single period in 7 course plans

- Teaching in the Block


## 4 X 4 Schedule

|  | Sem. 1 | Sem. 2 |
| :--- | :--- | :--- |
| Block 1 | Class 1 | Class 2 |
| Block 2 | Class 3 | Class 4 |
| Block 3 | Class 5 | Class 6 |
| Block 4 | Class 7 | Class 8 |

- Time per course-88 x 90
- Choices available-8
- Cost Factor- 5/8 (62.5\%), 6/8 (75\%), 7/8 (87.5\%)
- Student Load-8
- Teacher Load-5, 6, or 7
- Percentage Core: 50\%
- Meeting format: Daily-semester


## 4X4 Advantages

- Choice (Same as $8 \mathrm{~A} / \mathrm{B}, 4 \mathrm{X} 4$, and Modified 4X4; more than all others.)
- Flexibility for double-dosing
- Daily and semester teacher load
- Daily and semester student load
- Acceleration and credit recovery possibilities


## Adaptations Needed for the 4X4

- Performing Arts
- AP or IB
- Special Education
- Foreign Language


## The 4 X 4 Schedule (Music Variation 1)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Block I | 1 | 2 |
| Block II | 3 | 4 |
| Block III | 5 | 6 |
| Block IV | Marching Band | Concert Band |

## The 4 X 4 Schedule (Music Variation 3)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Block I | 1 | 2 |
| Block II | 3 | 4 |
| Block III | 5 | 6 |
| Block IV | Day 1: Band, Choir, Journ., PE/H, etc. |  |
|  | Day 2: Orchestra, Jazz Band, Chorale, comp., PE/H, etc. |  |

## AP Options

- One semester-one credit
- Two semesters AP-two credits
- One semester Pre-requisite; one semester AP-two credits
$\square$ A/B AP courses-one credit
- 3-9 Weeks AP+ 1 9-Week Elective


## The 4 X 4 Schedule (AP Variations)

|  | Semester I | Semester II |  |
| :---: | :---: | :---: | :---: |
| Var. 1 | 45 minutes: AP English |  |  |
|  | 45 minutes: AP Government and Economics |  |  |
| Var. 2 | 27 Weeks AP |  | 9 Weeks <br> Elective |
| Var. 3 | Day 1: AP Gov't \& Econ or CP Gov't \& Econ. |  |  |
|  | Day 2: AP English or CP English 12. |  |  |
| Var. 4 | 9 Weeks Elective | 27 Weeks AP |  |
| Var. 5 | Semester 1 <br> Prerequisite | Semester 2 <br> AP Course |  |

## The 4 X 4 Schedule (Special Ed. Variation 1)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Block I | Required Course 1 | Required Course 2 |
| Block II | Required Course 3 | Required Course 4 |
| Block III | Elective Course 1 | Elective Course 2 |
| Block IV | Resource Support Class |  |

## The 4 X 4 Schedule (Special Ed. Variation 2)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Block I | Required Course 1 | Required Course 2 |
| Block II | Required Course 3 | Required Course 4 |
| Block III | Elective Course 1 | Elective Course 2 |
| Block IV |  <br> Required Course 5 (i.e. SPED English |  |

## The 4 X 4 Schedule (Foreign Language Sequencing A)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Year 1 | Spanish 1 | Spanish 2 |
| Year 2 | Spanish 3 | Spanish 4 |
| Year 3 | Spanish 5 | AP Spanish |
| Year 4 | Other Language |  |

## The 4 X 4 Schedule (Foreign Language Sequencing B)

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Year 1 | Spanish 1 | Spanish 2 |
| Year 2 | Spanish 3 Either Semester |  |
| Year 3 | Spanish 4 Either Semester |  |
| Year 4 | Spanish 5 | AP Spanish |

## The Hybrid 4 X 4 Schedule with a Limited Number of Yearlong Embedded A/B Classes or "Skinnies"

|  | Semester I | Semester II |
| :---: | :---: | :---: |
| Block I | 1 | 2 |
| Block II | Day 1 Course 3 | Day 2 Course 4 |
| Block III | 5 | 6 |
| Block IV | Course 7 Everyday Yearlong "Skinny" |  |

## Hybrid 4X4 Advantages

- Choice (Same as 8-Period, 8 A/B, 4X4; more than all others.)
$\square$ Flexibility for double-dosing
$\square$ Daily and semester teacher load
$\square$ Daily and semester student load
- Mitigates testing and continuity concerns related to the 4 X 4 for certain courses


## 5 Block Trimester Schedule

|  | 60 <br> Days | 60 <br> Days | 60 <br> Days |
| :---: | :---: | :---: | :---: |
| Block <br> 1 | Class 1 <br> .5 CR | Class 6 <br> .5 CR | Class 11 <br> .5 CR |
| Block <br> 2 | Class 2 <br> .5 CR | Class 7 <br> .5 CR | Class 12 <br> .5 CR |
| Block <br> 3 | Class 3 <br> .5 CR | Class 8 <br> .5 CR | Class 13 <br> .5 CR |
| Block <br> 4 | Class 4 <br> .5 CR. | Class 9 <br> .5 CR. | Class 14 <br> .5 CR. |
| Block | Class 5 |  |  |
| 5 | .5 CR | Class 10 <br> .5 CR | Class 15 <br> .5 CR |

- Time per course-69 x 120
- Choices available-7.5
- Cost Factor- $4 / 5$ (80\%)
- Student Load-5
- Teacher Load-4
- Percentage Core: 4/7.5 (53\%)
- Meeting format: Daily-trimester


## 5-Block Advantages

- Choice (7.5)
- Flexibility for 1.5 credit classes
- Daily and trimester teacher load
- Daily and trimester student load
- More days of contact than 4X4


## 5-Block Adaptations Needed

- Performing Arts
- AP or IB
- Special Education


## Time Comparison Chart

|  | $\begin{gathered} 6 \text { Period } \\ +30 \text { Min. } \\ \text { Lunch } \end{gathered}$ | $\begin{gathered} 7 \text { Period } \\ \text { +30 Min. } \\ \text { Lunch } \end{gathered}$ | 8 Period <br> (1 Period <br> Lunch) | $\begin{gathered} 8 \text { Period } \\ +30 \text { Min. } \\ \text { Lunch } \end{gathered}$ | 9 Period <br> (1 Period <br> Lunch) | $\begin{gathered} \mathbf{6 A / B} \\ +30 \\ \text { Min. } \\ \text { Lunch } \end{gathered}$ | $\begin{gathered} 7 \mathrm{~A} / \mathrm{B} \\ +30 \\ \text { Min. } \\ \text { Lunch } \end{gathered}$ | 5 Block <br> Trimester <br> + $\mathbf{3 0}$ Min. <br> Lunch | $\begin{gathered} 8 \mathrm{~A} / \mathrm{B}, \\ \text { 4X4, } \\ \text { Hybrid } \\ +30 \\ \text { Min. } \\ \text { Lunch } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Homeroom | 13 | 14 | 12 | 11 | 10 | 13 | 15 | 15 | 13 |
| Passing Time | 35 | 40 | 40 | 45 | 50 | 20 | 25 | 30 | 25 |
| Lunch | 30 | 30 |  | 30 |  | 30 | 30 | 30 | 30 |
| Class Length | 57 | 48 | 46 | 43 | 40 | 119 | $\begin{gathered} 3 \times 100 \\ 1 \times 50 \end{gathered}$ | 69 | 88 |
| Total | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| Time Per Course | 10,260 | 8,640 | 8,280 | 7,740 | 7200 | 10,710 | 9,000 | 8280 | 7920 |
| Choices | 6 | 7 | 7 | 8 | 8 | 6 | 7 | 7.5 | 8 |
| Class <br> Meetings per Year | 180 | 180 | 180 | 180 | 180 | 90 | $\begin{gathered} 90 \text { or } \\ 180 \end{gathered}$ | 120 | 90 |
| $\begin{aligned} & \text { \% Core } \\ & \text { (E,M,SC,SS) } \end{aligned}$ | $\begin{gathered} 5 / 6 \\ (67 \%) \end{gathered}$ | $\begin{gathered} 4 / 7 \\ (57 \%) \end{gathered}$ | $\begin{gathered} 4 / 7 \\ (57 \%) \end{gathered}$ | $\begin{gathered} 4 / 8 \\ (50 \%) \end{gathered}$ | $\begin{gathered} 4 / 8 \\ (50 \%) \end{gathered}$ | $\begin{gathered} 5 / 6 \\ (67 \%) \end{gathered}$ | $\begin{gathered} 4 / 7 \\ (57 \%) \end{gathered}$ | $\begin{aligned} & 4 / 7.5 \\ & (53 \%) \end{aligned}$ | $\begin{gathered} 4 / 8 \\ (50 \%) \end{gathered}$ |

All computations based on a 7 hour ( 420 minutes) student day.

## Cost Comparison Chart

|  | 8-Period, <br> 8A/B, <br> 4X4, or <br> Hybrid; <br> Teach 7 | 7 Period <br> or 7 A/B; <br> Teach 6 | 6-Period <br> or 6 A/ <br> B; <br> Teach 5 | 5 Block <br> Trimester; <br> Teach 4 | 8-Period, <br> 8A/B, <br> 4X4, or <br> Hybrid; <br> Teach 6 | 7-Period <br> or 7A/B; <br> Teach 5 | $\mathbf{8 A / B ,}$ <br> 4X4, <br> Hybrid; <br> Teach 5 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Student <br> Load | 8 | 7 | 6 | 5 | 8 | 7 | 8 |
| Teacher <br> Load | 7 | 6 | 5 | 4 | 6 | 5 | 5 |
| Cost <br> Factor | $87.5 \%$ | $86 \%$ | $83 \%$ | $80 \%$ | $75 \%$ | $71 \%$ | $62.5 \%$ |

Less Expensive
More Expensive

## School Factors Related to Improving Student Achievement

$\square$ Balance the workload of students.
$\square$ Balance the workload of teachers.

- Provide extended learning time.
- Provide time in the master schedule for tutorials.
$\square$ Create a small group, caring learning environment
- Alter policies and grading practices that focus on "sorting and selecting" vs. "teaching and learning."
$\square$ Increase the amount of time students are actively engaged in their learning.


## What do Effective High Schools Do?

$\square$ Set high expectations for all students.
$\square$ Encourage more students to take rigorous programs (pre-AP, pre-IB, School-to-Work, dual enrollment, AP, IB).
$\square$ Create structures and supports to help students who have not traditionally been enrolled in these more rigorous curricula to be successful.
$\square$ Personalize the high school environment.

Years of Schooling

## Response to Intervention Processes



## RTI Student Tiers

* Tier 1: About $80 \%$ of students learn basic curriculum through typical instruction w/ differentiation.
* Tier 2: About 15-20\% of students need regular intervention; generally this is provided by special service providers or classroom teachers during the I/E period.
* Tier 3: About $2-5 \%$ of students need long-term and intensive intervention; faithful implementation of RTI requires that this intervention be in addition to the Tier 2 intervention, though in some schools it replaces the Tier 2 intervention.


## What is an Intervention/Enrichment Period?

* A period (or periods) of time built into the school master schedule during which no basic core instruction or courses are delivered.
* 30-45 minutes are devoted to this period(s) daily (or less frequently).
* Tier 2 (and sometimes Tier 3 or even Tier 1) interventions are provided during this time. For students not receiving intervention, enrichment opportunities must be provided.


## One Story



## Sample "Enhancement Period" Schedule

| Teacher | A Day | B Day | C Day | D Day | E Day | F Day |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Math TA | Dept. | Tier 2 Alg. | Advisory | Tier 2 Alg. | Math Club | Alg. Help |
| Math TB | Dept. | AP Calc. <br> Help | Advisory | ALG. 2 Int. | AP Calc. <br> Help | ALG. 2 Int. |
| SS TA | Forensics | Dept. | Advisory | WH Int. | WH Int. | Project <br> Groups |
| SS TB | US H Int. | Dept. | Advisory | US H Int. | US H Int. | Stu. Govtt |
| SC TA | AP Bio. Help | Bio. Int. | Advisory | Dept. | Bio. Int. | Bio. Int. |
| SC TB | AP Chem. <br> Help | Chem. Int. | Advisory | Dept. | Chem. Int. | Chem. Int. |
| Spanish | SP I Int. | SP Club | Advisory | SP 1 Int. | Dept. | SP 2 Int. |
| Eng. TA | Eng. 9 Int. | Eng. 10 Int. | Advisory | Eng. 9 Int. | Dept. | Eng. 10 Int. |
| Eng. TB | Writing Lab | Eng. 12 Int. | Advisory | Eng. 11 Int. | Dept. | AP Eng. |
| Help |  |  |  |  |  |  |

## High School I/E Scheduling Options

* Where do we get the time?
* How long should the period be?
* Where in the schedule should the period be placed
* How frequently should the period occur?

Your school may need an I/E period, but remember the prime rule of school scheduling:

# To put something <br> in, you must take something out! 

## Where do we find The Time?

## Secondary



## Westfield HS, Fairfax County, VA morphed from this...

2009-10 Regular Bell Schedule (Monday, Wednesday, Thursday)

2009-10 Bulldog Block Schedule (Tuesday \& Friday)

| TIME | A | B |
| :---: | :---: | :---: |
| 7:20-8:44 | Period 1 | Period 2 |
| 8:52-9:32 | Bulldog Block | Bulldog Block |
| 9:40-10:54 | Period 3 | Period 4 |
| 11:02-1:02 | Period 5 | Period 6 |
| $\begin{gathered} \text { A Lunch } \\ \text { Lunch 11:02-11:32 } \\ \text { Class 11:37-1:02 } \end{gathered}$ |  |  |
| B Lunch |  |  |
| Lunch 11:32-12:02 |  |  |
| Class 12:07-1:02 |  |  |
| C Lunch |  |  |
| Lunch 12:02-12:32 |  |  |
| Class 12:37-1:02 |  |  |
| D Lunch |  |  |
| Class 11:02-12:32 |  |  |
| Lunch 12:32-1:02 |  |  |
| 1:10-2:05 | Period 7 | Period 7 |

## To this: Westfield HS, Fairfax County, VA

## 2011-12 Daily Bulldog Block

Schedule

| TIME | A | B |
| :---: | :---: | :---: |
| 7:20-8:50 | Period 1 | Period 2 |
| 8:56-9:31 | Bulldog <br> Block | Bulldog <br> Block |
| 9:37-11:02 | Period 3 | Period 4 |
| 11:06-1:07 | Period 5 | Period 6 |
| A Lunch <br> Lunch 11:06-11:32 <br> Class 11:42-1:07 |  |  |
| B Lunch |  |  |
| Lunch 11:37-12:07 |  |  |
| Class 12:12-1:07 |  |  |
| Class 11:08-12:07 |  |  |
| Lunch 12:07-12:37 |  |  |
| Class 12:42-1:07 |  |  |
| D LunchClass 11:08-12:37 |  |  |
|  |  |  |
| Lunch 12:37-1:07 |  |  |
| 1:13-2:05 | Period 7 | Period 7 |

## 2012-13 Wissahickon High School Student Schedule

| Early Lunch | 7:37-8:35 | 8:39-8:51 | 8:55-9:53 | 9:57-10:55 | 10:59-11:29 | 11:33-12:31 | 12:35-1:33 | 1:37-2:35 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Day 1 | Course 1 | HR | Course 2 | Course 3 | Lunch | Course 5 | Course 6 | Course 7 |
| Day 2 | Course 2 | HR | Course 3 | Course 4 | Lunch | Course 6 | Course 7 | Course 8 |
| Day 3 | Course 3 | HR | Course 4 | Course 1 | Lunch | Course 7 | Course 8 | Course 5 |
| Day 4 | Course 4 | HR | Course 1 | Course 2 | Lunch | Course 8 | Course 5 | Course 6 |
|  | 7:37-8:57 | $7{ }^{\text {7 }}$ |  | 10:25-11:13 | 11:17-11:47 | 11:51-1:1 | 1:15-2:35 |  |
| Day 5 | Course 1/HR | R Course 3 |  | I/E | Lunch | Course 5 |  | urse 7 |
| Day 6 | Course 2/HR | $R \quad$ Course 4 |  | I/E | Lunch | Course 6 | Course 8 |  |
|  |  |  |  |  |  |  |  |  |
| Mid Lunch | 7:37-8:35 | 8:39-8:51 | 8:55-9:53 | 9:57-10:55 | 10:59-11:57 | 12:01-12:31 | 12:35-1:33 | 1:37-2:35 |
| Day 1 | Course 1 | HR | Course 2 | Course 3 | Course 5 | Lunch | Course 6 | Course 7 |
| Day 2 | Course 2 | HR | Course 3 | Course 4 | Course 6 | Lunch | Course 7 | Course 8 |
| Day 3 | Course 3 | HR | Course 4 | Course 1 | Course 7 | Lunch | Course 8 | Course 5 |
| Day 4 | Course 4 | HR | Course 1 | Course 2 | Course 8 | Lunch | Course 5 | Course 6 |
|  | 7:37-8:57 |  | 1-10:21 | 10:25-11:13 | 11:17-11:55 | 11:59-12:29 | 12:33-1:11 | 1:15-2:35 |
| Day 5 | Course 1/HR |  | ourse 3 | I/E | Course 5 | Lunch | Course 5 | Course 7 |
| Day 6 | Course 2/HR |  | ourse 4 | I/E | Course 6 | Lunch | Course 6 | Course 8 |


| Late Lunch | $\mathbf{7 : 3 7 - 8 : 3 5}$ | $\mathbf{8 : 3 9 - 8 : 5 1}$ | $\mathbf{8 : 5 5 - 9 : 5 3}$ | $\mathbf{9 : 5 7 - 1 0 : 5 5}$ | $\mathbf{1 0 : 5 9 - 1 1 : 5 7}$ | $\mathbf{1 2 : 0 1 - 1 2 : 5 9}$ | 1:03-1:33 | 1:37-2:35 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Day 1 | Course 1 | HR | Course 2 | Course 3 | Course 5 | Course 6 | Lunch | Course 7 |
| Day 2 | Course 2 | HR | Course 3 | Course 4 | Course 6 | Course 7 | Lunch | Course 8 |
| Day 3 | Course 3 | HR | Course 4 | Course 1 | Course 7 | Course 8 | Lunch | Course 5 |
| Day 4 | Course 4 | HR | Course 1 | Course 2 | Course 8 | Course 5 | Lunch | Course 6 |
|  | 7:37-8:57 | 9:01-10:21 | $\mathbf{1 0 : 2 5 - 1 1 : 1 3 ~}$ | $\mathbf{1 1 : 1 7 - 1 2 : 3 7}$ | $\mathbf{1 2 : 4 1 - 1 : 1 1}$ | $\mathbf{1 : 1 5 - 2 : 3 5}$ |  |  |
| Day 5 | Course $1 /$ HR | Course 3 | I/E | Course 5 | Lunch | Course 7 |  |  |
| Day 6 | Course $2 /$ HR | Course 4 | I/E | Course 6 | Lunch | Course 8 |  |  |

What day is it?
What lunch do I have?

The 8 A/B Schedule with and Intervention/Enrichment Block

|  | Day 1 | Day 2 |
| :--- | :---: | :---: |
| Block I | 1 | 2 |
| Block II | 3 | 4 |
| Block III | 5 | 6 |
| Block IV | 7 | Intervention/ <br> Enrichment |

## 8 A/B Block and Single Period Hybrid Schedule w/I/E (2-day block)

|  | M | T | W | TH | F |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Period 1 | Class 1 | Class 1 | Class 1 | Class 2 | Class 1 |
| Period 2 | Class 2 | Class 2 | I/E | I/E | Class 2 |
| Period 3 | Class 3 | Class 3 | Class 3 | Class 4 | Class 3 |
| Period 4 | Class 4 | Class 4 |  |  | Class 4 |
| Period 5 | Class 5 | Class 5 | Class 5 | Class 6 | Class 5 |
| Period 6 | Class 6 | Class 6 |  |  | Class 6 |
| Period 7 | Class 7 | Class 7 | Class 7 | Class 8 | Class 7 |
| Period 8 | Class 8 | Class 8 |  |  | Class 8 |

## 8 A/B Block and Single Period Hybrid SCHEDULE W/I/E (4-DAY BLOCK)

|  | M | T | W | TH | F |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Period 1 | Class 1 | Class 1 | Class 2 | Class 1 | Class 2 |
| Period 2 | Class 2 |  | I/E | I/E | I/E |
| Period 3 | Class 3 | Class 3 | Class 4 | Class 3 | Class 4 |
| Period 4 | Class 4 |  |  |  |  |
| Period 5 | Class 5 | Class 5 | Class 6 | Class 5 | Class 6 |
| Period 6 | Class 6 |  |  |  |  |
| Period 7 | Class 7 | Class 7 | Class 8 | Class 7 | Class 8 |
| Period 8 | Class 8 |  |  |  |  |

## 8 A/B SCHEDULE WITH I/E

|  | A Day | B Day |
| :---: | :---: | :---: |
| Block 1 | Class 1 | Class 2 |
| Intervention/Enrichment |  |  |
| Block 2 | Class 3 | Class 4 |
| Block 3 | Class 5 | Class 6 |
| Block 4 | Class 7 | Class 8 |

## High School Intervention/Enrichment Period Sample Schedules



## HS Options for Organizing the I/E Period

* Only students with mandatory interventions are required to attend. Optional assistance and optional enrichment also are provided. (Late arrival, early dismissal, and/or open campus are permitted.)
* All students are required to attend and are assigned to a home base. Students not receiving a mandatory intervention may attend optional assistance or enrichment opportunities through a pass system.
* All students are required to attend and are assigned to a "call back" for each class on a rotational schedule. Students not receiving an intervention in that class may attend optional assistance or enrichment opportunities through a pass system.
* A cycle of intervention and enrichment opportunities is created and all students are required to sign-up for an activity each day (or term) of the cycle. Some students may be required to attend certain interventions.


## Bulldog Block Rules

- Bulldog Block will be for 35 minutes each day. During this 35 -minute school-wide intervention time, all teachers will be available for students-this includes the periods during which teachers are not assigned class periods.
- Students will continue to rotate to class periods of BDB - A/B Calendar Schedule includes Bulldog Block period for each day. Attendance is taken in ClassXP for Bulldog Block.
- Students with a C-, D or $F$ in a class must stay in their assigned Bulldog Block period in order to receive additional instruction/remediation from the assigned teacher. Additionally, if a student currently has a C or above in the class, but needs to make up an assignment/test, the teacher may require that student to stay with them that period.
- The assigned Bulldog Block teacher has the ability to allow a student with an $A, B$, or $C$ to leave their Bulldog Block period with a pre-approved pass (student planner) from a teacher who is not assigned a class for that period.
- For attendance purposes, students will check in with their assigned Bulldog Block period teacher. Then, only students with a pre-approved pass (signed planner on the specific date- not the "passport" section at the end of the planner) may be released during the first 5 minutes of the Bulldog Block period. Students should NOT be permitted to leave a classroom beyond the 5-minute window. Teacher signatures must be legible and should include room \#.
- Receiving teachers are to keep an attendance log of students they are expecting and to have students sign in upon arrival to Bulldog Block. If a student does not show, the receiving teacher will email the assigned Bulldog Block teacher who will update ClassXP attendance. Remember, the assigned Bulldog Block teacher is responsible for ClassXP attendance during Bulldog Block.
- No new material is to be covered during Bulldog Block. Any class activities should not have to be made up and are not to be graded. Bulldog Block time may be used for remediation, skill development, organizational skills, makeup work/retakes/test corrections, quiet study and reading time, enrichment activities, building relationships within the class, and making teacher/student connections. At times, school-wide, grade-level, and/or administratively-approved meetings/programs may take place during the Bulldog Block period.
- Beginning at 7 am each morning, the library staff will distribute "tickets" to students on a first-come, firstserved basis to go to the library during Bulldog Block. The library will be a quiet study hall, or an opportunity for research and/or computer use for academic work. Passes will be color coded and have the current date on the pass. Students must first "check in" with their Bulldog Block teacher for attendance and permission to be released to go to the library.


## Tutorial Calendar Erie, PA

| Week of | Monday | Tuesday | Wednesday | Thursday | Friday |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Aug. 25-27 | L |  | 25A <br> HR Setup | $\begin{array}{\|c\|} \hline \text { 26B } \\ \hline \end{array}$ <br> CLASS MEETINGS | 27A <br> CLASS MEETINGS |
| Aug. 30-Sep. 3 | 30B Tutorial | 31A <br> Activity Day | 1B ${ }^{\text {B }}$ Tutorial | 2A <br> Eng. Dept. | 3B <br> Tutorial |
| Sep. 6-10 | No School | 7A <br> MENTORING/ <br> CHALLENGE | 8B $\quad$ Tutorial | 9A <br> Math Dept. |  |
| Sep. 13-17 | 13A ${ }^{\text {T }}$ Tutorial | Activity | 15A ${ }^{\text {1 }}$ Tutorial | 16B <br> Sci. Dept. | 17A Tutorial |
| Sep. 20-24 | 20B ${ }^{\text {2 }}$ Tutorial | 21A <br> Activity | 22B ${ }^{\text {2 }}$ Tutorial | 23A <br> Soc. Studies Dept. | $24 B$ <br> Tutorial |
| Sep. 27- Oct. 1 | 27A Tutorial | $\frac{28 \mathrm{~B}}{\text { MENTORING }}$ | 29A ${ }^{\text {T }}$ Tutorial | 30B <br> Fam. \& Cons Sci Dept. | $\mathbf{1 A}$ <br> Tutorial |
| Oct. 4-8 | 4B $\quad$ Tutorial | 5A <br> Activity | 6B ${ }^{\text {6 }}$ Tutorial | $\begin{array}{\|r\|} \hline 7 \mathrm{~A} \\ \hline \text { Visual Arts Dept. } \\ \hline \end{array}$ | 8 <br> Dist. In-Service |
| Oct. 11-15 | 11 Reg. In-Service | 12B <br> Activity | 13A ${ }^{\text {r }}$ Tutorial | 14B <br> Business Dept. | 15A Tutorial |
| Oct. 18-22 | 18B ${ }^{\text {1 }}$ Tutorial | 19A <br> GRAD. PROJECT | 20B ${ }^{\text {20, }}$ Tutorial | 21A <br> Performing Arts Dept. | 22B $\quad$ Tutorial |
| Oct. 25-29 | 25A Tutorial | 26B MENTORING | 27A Tutorial | 28B <br> Spec. Ed Dept. | 29A <br> Tutorial End of Q1 |
| Nov. 1-5 | Tutorial | $2$ <br> Parent Conf. Day | 3A ${ }^{\text {3 }}$ Tutorial | $\begin{array}{l\|l} \hline \text { 4B } & \\ \hline \text { Technology Education } \\ & \text { Dept. } \\ \hline \end{array}$ | 5A <br> Tutorial |
| Nov. 8-12 | Tutorial | 9A <br> Activity | 10B Tutorial | $\begin{array}{\|l\|} \hline 11 \mathrm{~A} \\ \text { Wellness Dept. } \end{array}$ | 12B <br> Tutorial |
| Nov. 15-19 | 15A $\quad$ Tutorial |  | 17A Tutorial | 18B <br> World Language Dept. | $\square$ <br> 19A <br> Tutorial |
| Nov. 22-26 | 22B $\quad$ Tutorial | $\begin{array}{\|c\|} \hline \text { 23A } \\ \text { GRAD. PROJECT } \\ \hline \end{array}$ | 24B Tutorial | $25$ <br> No School | $26$ <br> No School |
| Nov. 29-Dec. 3 | No School | 30A <br> Activity | 1B Tutorial | 2A ${ }^{\text {2 }}$ Eng. Dept. | 3 B  <br>  Tutorial <br> 10 l  |
| Dec. 6-10 | 6A Tutorial | $\begin{array}{\|r\|r\|} \hline 7 \mathrm{~B} \\ \hline \\ \text { MENTORING } \\ \text { /CHALLENGE } \\ \hline \end{array}$ | 8A ${ }^{\text {P4 }}$ Tutorial | 9B <br> Math Dept. | 10A ${ }^{\text {T }}$ Tutorial |
| Dec. 13-17 8 $^{\text {th }}$ Grade Move Up at MIHS 12/15 | $\begin{array}{\|c\|} \hline \text { 13B } \\ \begin{array}{c} \text { Vocal (MIHS) \& } \\ \text { Instrumental (MHS) Concert } \end{array} \end{array}$ | $\begin{array}{\|l\|} \hline 14 \mathrm{~A} \\ \text { Vocal (MIHS) \& } \\ \text { Instrumental (MHS) Concert } \end{array}$ | 15B ${ }^{\text {Tutorial }}$ | 16A <br> Science Dept. | 17B ${ }^{\text {17 }}$ Tutorial |
| Dec. 20-24 | 20A <br> Vocal (MHS) \& Instrumental (MIHS) Concert | 21B <br> Vocal (MHS) \& Instrumental (MIHS) Concert | $22 \mathrm{~A}$ <br> Tutorial | No School | 24 No School |

## Wisconsin HS

| Dept | 200 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aide | Bis | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-LMC | Learning Support |
| Science | Boc | Advising | Bio Int | Bio Int | Bio Int | Dept Collaboration | Science Enrichment | Technology Group | Science Enrichment |
| SS | Bó | Advising | Dept Collaboration | AP Apsych review | Comp Lab | Psych Int | Psych Int | Best Practice | Psych Int |
| Business | Yae | Advising | Dept Collaboration | Business Int | School Store | DECCA | Comp Lab | Technology Group | Business Int |
| Tech Ed | Cas | Advising | Auto Shop I/E | Renewable I/E | Metals I/E | Dept Collaboration | West Gym | Supervision-Metals | Metals I/E |
| Aide | Cle | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-LMC | Learning Support |
| Music | Col | Advising | MS | MS | MS | MS | MS | MS | MS |
| Art | Rei | Advising | Art I/E | Art I/E | Dept Collaboration | Art I/E | Art I/E | Supervision-Art Tech | Art Club |
| Business | Fin | Advising | Dept Collaboration | Business I/E | Accounting I/E | Business I/E | Accounting I/E | Scheduling | Computer I/E |
| SPED | Fra | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Technology Group | Learning Support |
| FCE | Gill | Advising | Dept Collaboration | Foods I/E | Foods I/E | Foods I/E | FCCLA | Leadership \& Character | Foods I/E |
| FCE | Hal | Advising | Dept Collaboration | Clothing I/E | Relationships I/E | Housing I/E | FCCLA | House Project | FCE I/E |
| Music | Ols | Advising | Comp Lab | Lessons | Jazz Band | Lessons | Dept Collaboration | Technology Group | Jazz Band |
| SPED | Hof | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Technology Group | Learning Support |
| SPED | Hor | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Advising Group | Learning Support |
| SS | Jan | Advising | Dept Collaboration | US History Int | American Pol Int | US History Enrich | American Pol Enrich | Leadership \& Character | US History I/E |
| Science | Klo. | Advising | Hum Anat Int | Ethics Enrich | Hum Anat Enrich | Dept Collaboration | Etichs Int | Supervision-Main Gym | Hum Anat Int |
| Aide | Knı | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-West Gym | Learning Support |
| Aide | Knv | Aide collaboration | ISS | ISS | ISS | ISS | ISS | Supervision-West Gym | ISS |
| PE | Lea | Advising | A/D | Dept Collaboration | A/D | A/D | A/D | Leadership \& Character | A/D |
| Aide | Lind | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-Main Gym | Learning Support |
| English | Lob | Advising | Writing I/E | Dept Collaboration | History I/E | English 10 I/E | Writing I/E | Best Practice | English 10 I/E |
| Alt Ed | Ma | Phoenix | Phoenix | Phoenix | Phoenix | Phoenix | Phoenix | Phoenix | Phoenix |
| Ag | Ma | Advising | Ag I/E | Ag I/E | Ag I/E | Dept Collaboration | FFA | House Project | Ag I/E |
| PE | Mo | Advising | Health I/E | Dept Collaboration | Health I/E | Health I/E | Health I/E | Supervision-West Gym | Health I/E |
| Math | Ne | Advising | Math I/E | Math E | Dept Collaboration | Math I/E | Math I/E | Technology Group | Math I/E |
| Tech Ed | Ny | Advising | Metals I/E | Woods I/E | Woods I/E | Dept Collaboration | Woods I/E | House Project | Woods I/E |
| Aide | O'B | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-Cafeteria | Learning Support |
| Tech Ed | Ols | Advising | Construction Site | Construction Site | Construction Site | Dept Collaboration | Construction Site | House Project | Construction Site |
| Art | Per | Advising | Drawing I/E | Drawing I/E | Dept Collaboration | 3-D I/E | 3-D I/E | Supervision-Cafeteria | Drawing I/E |
| English | Pet | Advising | Speech I/E | Dept Collaboration | English I/E | English I/E | Speech I/E | Technology Group | English I/E |
| Math | Pet | Advising | Math I/E | Japanese | Dept Collaboration | Math E | Japanese | Advising Group | Math I/E |
| Math | Pol | Advising | Math E | Math I/E | Dept Collaboration | Math I/E | Math I/E | Leadership \& Character | Math I/E |
| SPED | Roy | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Supervision-Byrns | Learning Support |
| World Lang | Rul | Advising | Spanish Club | Spanish I | Dept Collaboration | Spanish E | Spanish I | Advising Group | Spanish E |
| World Lang | Rul | Advising | Spanish Club | Spanish E | Dept Collaboration | Spanish I | Spanish E | Scheduling | Spanish I |
| PE | Ryl | Advising | PE Make-up | Dept Collaboration | PE Make-up | PE Make-up | PE Make-up | Leadership \& Character | PE Make-up |
| SS | Ryl | Advising | Dept Collaboration | History I | History E | History I | History I | Scheduling | History E |
| English | Sha | Advising | English I/E | Dept Collaboration | English I/E | English I/E | College Prep | Advising Group | English I/E |
| SPED | Bys | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Best Practice | Learning Support |
| Aide | Sm | Aide collaboration | Learning Support | Learning Support | Learning Support | Learning Support | Learning Support | Supervision-Wood Shop | Learning Support |
| SPED | Ste | Advising | Learning Support | Learning Support | Learning Support | Learning Support | Dept Collaboration | Supervision-LMC | Learning Support |
| Science | Sto | Advising | Science I/E | Science I/E | Science I/E | Dept Collaboration | Science I/E | Supervision-Computer La | Science I/E |
| English | Tie | Advising | Yearbook | Dept Collaboration | English I/E | Yearbook | English I/E | Scheduling | Paw Print |
| English | Wa | Advising | English E | Dept Collaboration | English I | English E | English I | Best Practice | English I/E |
| Science | Wo | Advising | Chemistry E | GGT | Physics E | Dept Collaboration | Chemsitry I | Technology Group | Physics I |
| SS | Wr | Advising | Dept Collaboration | History E | Investment Club | History I | Comp Lab | Technology Group | History I |
| Math | You | Advising | Math I | Math I | Dept Collaboration | Math I | Math E | Supervision-Finch | Math E |

## Wissahickon HS Schedule and IE Video



Link to WHS Scheduling Page: http://www.wsdweb.org/page.cfm?p=2214

## Caveat emptor!

## Scheduling the Intervention/

Enrichment period is relatively easy.
Changing the culture of a school to one in which teachers and administrators collaborate on data analysis, progress monitoring, and the organizational tasks necessary to make the I/E period truly responsive to students' learning needs is very difficult!

## IE PLANNING PROCESS

* IE Period Length and Frequency
* Departmental and Student Input
* Tier 1, Tier 2 and Enrichment Offerings
* Registration System
* Accountability System
* Monitoring and Evaluation


## Key Factors: High School I/E and RTI

- Scheduling the Intervention/Enrichment period is easy compared to organizing and preparing for instruction within it.
- All students and staff must be productively engaged during the period.
- A decision must be made as to what role students' choice plays in the I/E period.
- A computer management program with capability of tracking students' I/E choice/assignment and attendance is necessary.
- Clear, consistent, and involved leadership is required to ensure that assessment, data analysis, tiering, planning intervention and enrichment instruction, and progress monitoring all are carried through.
- Time must be allocated for planning for groupings and instructional activities.


## Key Factors: High School I/E and RTI con't.

- A Response to Intervention (RTI) type tier structure based upon clearly defined assessments is necessary to allocate students to Tier 2 and 3 interventions.
- Providing extra help during the I/E period on an as needed basis may be a more practical way of delivering Tier 1 interventions than an expectation of differentiation within regular class time.
- It is recommended that specific programs for Tier 2 and Tier 3 interventions be adopted rather than having teachers design their own.
If Tier 3 students are to receive both Tier 2 and Tier 3 interventions, Tier 2 is provided during the I/E period and Tier 3 most likely replaces a class in the regular schedule.
- A decision must be made as to whether or not special services (i.e. special education or ESOL) will be "the" intervention for some qualifying students during the I/E time or will they be served at a different time by those professionals.
- While some school-wide, grade level, or team activities (assemblies, pep rallies, school pictures, guidance meetings, course registration, seminars, etc.), may usurp some meetings of this period, the primary purpose is for Intervention/Enrichment.


## 7-Period Day Double Dose

| Per. 1AP Chem |
| :---: |
| Per. 2 AP Chem |
| Period 3 |
| Period 4 |
| Period 5 |
| Period 6 |
| Period 7 |

## Double Dose

|  | Day 1/Sem.1 | Day 2/Sem. 2 |
| :---: | :---: | :---: |
| Block I | English | Science |
| Block II | Algebra 1 Pt. 1 | Algebra 1 Pt.2 |
| Block III | Social Studies | PE/H |
| Block IV | Elective | Elective |

## Parallel Double Dose

|  | Day 1/Sem.1 | Day 2/Sem. 2 |
| :---: | :---: | :---: |
| Block I | English | Science |
| Block II | AP Statistics | Computer Class |
| Block III | Social Studies | PE/H |
| Block IV | Elective | Elective |

## Two Double Doses

|  | Day 1/Sem.1 | Day 2/Sem. 2 |
| :---: | :---: | :---: |
| Block I | AP English | AP English |
| Block II | AP Calculus | AP Calculus |
| Block III | Social Studies | PE/H |
| Block IV | Elective | Science |

## Double-Duty Double Dose

|  | Day 1/Sem.1 | Day 2/Sem. 2 |
| :---: | :---: | :---: |
| Block I | English | Science |
| Block II | AP W. History | AP W. History/ <br> AVID |
| Block III | Social Studies | PE/H |
| Block IV | Elective | Elective |

## Key Aspects of Double Dosing

- Adding more instructional time requires a revision of the course pacing guide; how is the additional time going to be utilized effectively?
- Not all students enrolled in an AP course require additional time to learn; when is double dosing justified for all?
$\square$ Double dosing eats up FTEs in the department utilizing the practice increasing class size in other departmental sections or requiring additional departmental staffing.
- Double dosing eats up electives in students' schedules; this is especially problematic in 6 and 7 course schedules or when multiple courses are double-dosed in any schedule.


## Key Aspects of Double Dosing, con't.

- Instructors often favor double-dosing for AP courses because it provides an edge over the competition, it reduces the number of groups and preps for the teacher, and it increases the time the instructor spends with "better" students. Consequently, the "default" format for all courses (including AP courses) should be the standard format: one period per day or an every-other-day block. (Please note while the standard format for the 4X4 is a block class that meets daily for one semester, we do not recommend this for AP courses because of the May testing timetable. Most schools that operate a 4X4 schedule, hybridize it for AP courses by embedding an $A / B$ schedule into the master for a limited set of courses.)


## 7-Period Day Support Course

| Per. 1AP A/B Calc. |  |
| :---: | :---: |
| P1. D1 <br> AP Support | P1. D2 <br> PE or 5 Elec. |
| Period 3 |  |
| Period 4 |  |
| Period 5 |  |
| Period 6 |  |
| Period 7 |  |

## The 8 A/B Schedule: AP Support

|  | Day 1 | Day 2 |
| :---: | :---: | :---: |
| Block I | U.S. History A.P. A.P. Support or |  |
| Block II | English 12 | Spanishive IV |
| Block III | Math Analysis | Physics |
| Block IV | Elective | Elective |

## The 8 A/B Schedule: AP Support

|  | Day 1 | Day 2 |
| :---: | :---: | :---: |
| Block I | A.P. World | A.P. Support or |
| Block II | English 10 | AVID |
| Block III | Math Analysis | Physics |
| Block IV | Elective | Elective |

## The 4X4 Schedule: Algebra I A/B Support

|  | Day 1 | Day 2 |
| :---: | :---: | :---: |
| Block I | Day 1: <br> Algebra I | Day 2: Algebra 1 <br> Support or Elective |
| Block II | English 9 | Spanish I |
| Block III | Earth Science | World Hist. |
| Block IV | Elective | Elective |

## The 8 A/B Schedule: Algebra 1 Support

|  | Day 1 | Day 2 |
| :---: | :---: | :---: |
| Block I | Geometry 1 | Geometry Support <br> or Elective |
| Block II | English 9 | Spanish I |
| Block III | Earth Science | World Hist. |
| Block IV | Elective | Elective |

## Critical Issues Regarding AP Support Classes

- AP support classes may be course specific or more generic departmental supports serving multiple AP courses.
$\square$ Is an AP support course elective for all or mandatory for some?
$\square$ If it is mandatory for some, criteria must be established to determine who must enroll.


## Critical Issues Regarding AP Support Classes, con't.

$\square$ If AP support is elective, care must be taken to ensure that instructors do not make the support course a "required" elective, thereby creating a double dose.

- Support courses must be assigned legitimate stateapproved course codes so that students may earn credit.
- Students enrolled in support courses must not be penalized by limiting their grade in the AP course, because "It's not fair that they have more time."


## Question???

$\square$ Under what conditions would it be preferable to double dose the whole group creating an identifiable cohort that bonds together versus differentiating between "Tier 1" students who don't need AP support and "Tier 2" students, who do need support?

## Scheduling a Summer or Pre-AP Critical Skills Class (or sooner or bigger)

- 4-6 weeks in summer or the semester before attempting social science, English or science AP courses
$\square$ Content to include critical reading and writing skills related to the following:
$\checkmark$ Cause and effect
$>$ Deductive reasoning
$\checkmark$ Inductive reasoning


## Double Blocks of LA and Math with Tutorials: Student Schedule

|  | Day 1 | Day 2 |
| :---: | :---: | :---: |
| Block I | Language Arts and Reading |  |
| Block II | Algebra I |  |
| Block III | Social Studies | LA Tutorial 45m |
|  | Math Tutorial 45m |  |
| Block IV | PE/H | Dlective or Darth <br> Science |

## Re-cycling in Mathematics

|  | Sem.1 | Sem. 2 |
| :---: | :---: | :---: |
| Block I | LA | Science |
| Block II | Algebra I-P1 | Algebra I-P1 or P2 |
| Block III | Social Studies | PE/H |
| Block IV | Elective | Elective |

## Recovery Model (Sem. 1; 3 Courses)

(Possibly for Grade 8 Failures)

|  | Semester 1 |  |  | Semester 2 |
| :---: | :---: | :---: | :---: | :---: |
|  | 30 <br> Days | 30 <br> Days | 30 <br> Days | Potential Re-entry |
| Block I | C1 | C2 | C3 | Course 5 |
| Block III | C1 | C2 | C3 | Course 6 |
| Block III | C1 | C2 | C3 | Course 7 |
| Block IV | C4-Dlective | C8-Elective |  |  |

## Recovery Model (Sem. 2)

 (For $1^{\text {st }}$ Semester Failures)|  | Semester 1 | Semester 2 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 30 <br> Days | 30 <br> Days | 30 <br> Days |
| Block I | Req. Course 1 | C5 (1) | C6(2) | C7 |
| Block II | Req. Course 2 | C5 (1) | C6(2) | C7 |
| Block III | Req. Course 3 | C5(1) | C6(2) | C7 |
| Block IV | Elective Course 4 | Elective Course 8 |  |  |

## Recovery Model (Sem. 1; 2 Courses)

(Possibly for Grade 8 Failures)

|  | Semester 1 |  | Semester 2 |
| :--- | :---: | :---: | :---: |
|  | 45 <br> Days | 45 <br> Days | Potential <br> Re-entry |
| Block I | Eng. 9 | Alg. 1 | Course 5 |
| Block II | Eng.9 | Alg. 1 | Course 6 |
| Block III | C3-Elective | Course 7 |  |
| Block IV | C4-Dlective | C8-Dlective |  |

## Recovery Model (Sem. 2; 2 Courses)

(For $1^{\text {st }}$ semester failures)

|  | Semester 1 | Semester 2 |  |
| :---: | :---: | :---: | :---: |
|  | 90 Days | 45 Days | 45 Days |
| Block I | Course 1 | C5 | C6 |
| Block II | Course 2 | C5 | C6 |
| Block III | Course 3 | C7-Elective |  |
| Block IV | Course 4 | C8-Elective |  |

## Recovery Model

 (Sems. 1 \& 2; 4 Courses)|  | Semester 1 |  | Semester 2 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 45 Days | 45 Days | 45 Days | 45 Days |
| Block I | Eng.9 | Alg. 1 | US H. | Bio. |
| Block II | Eng.9 | Alg. 1 | US H. | Bio. |
| Block III | C3-Elective | C7-Elective |  |  |
| Block IV | C4-Elective | C8-Dlective |  |  |

## Achieving Common Goals

- Common Curriculum
- Common Pacing
$\wedge$ Common Formative and Summative Assessments
$\wedge$ Collaborative Monitoring System
$\Delta$ Common Time for Intervention and Enrichment


## Progressive Algebra

Rettig and Canady, 1998.

| T's | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MA | A1 | A2 | A3 | A4 | G1 | G2 | G3 | G4 |
| MB | A1 | A2 | A3 | A4 | G1 | G2 | G3 | G3 |
| MC | A1 | A2 | A3 | A3 | A4 | G1 | G2 | G2 |
| MD | A1 | A2 | A2 | A3 | A4 | A4 | G1 | G1 |
| ME | A1 | A1 | A2 | A2 | A3 | A4 | A4 | G1 |
| MF | A1 | A1 | A2 | A2 | A3 | A3 | A4 | A4 |

Key: Q=4.5 weeks; A=Algebra I, 4 Parts; G=Geometry 4 Parts
-"If an educator keeps using the same strategies over and over and the student keeps failing,


# who really is the slow learner?" 

## Staff Development and Preparation

$\square$ Schedule Creation and Modification
$\checkmark$ Program of studies

- Scheduling calendar
$\square$ Revision (or creation of) Pacing Guides
$\square$ Teaching in the Block
- Policy Changes
- Communications' Plan
- Evaluation Plan


## Staff Development Planning

I. Subject-Specific Issues: "Surviving and Thriving in a Block Schedule"

| 8:30-9:30 | Panel "General Instructional Issues" |
| :--- | :--- |
| 9:30-9:45 | Break |
| 9:45-11:45 | Subject Area Breakouts |
|  | Topics: Planning, pacing, classroom <br> organization, time use, instructional |
|  | strategies and assessment. |
| 11:45-1:00 | Lunch |
| 1:00-2:30 | Subject Area Breakouts |
|  | Topic: Sample Lesson |
| 2:30-2:45 | Break |
| 2:45-3:30 | Panel "Q and A" |

II. Instructional Strategies
A. Cooperative Learning (Minimum 2 days)
B. Socratic Seminars (2 days) (Humanities Teachers)
C. Technology (2 days) Math/Science/Tech/ Teachers
D. Models of Teaching (1-2 days)

## III. Pacing Guides and Lesson Design (2 days in departments)

IV. On-going Staff Development
A. Collaborative sharing by and/or across departments scheduled on a regular basis.
B. District-wide sessions by departments to share what works.
C. Additional staff development sessions

## When I die,

I hope it's during a lecture; the difference between
life and death will be so small,
that I won't notice it!
(Anonymous Student)

## Teaching in a block schedule is like eternity,

and eternity is spent in one of two places.

John Strebe

## The Four Circles of Engagement <br> Cognitive Domain



Social/Emotional Domain

## Three-Part Lesson-Design

1. Explanation (20-25 mins.)

Objective
Plan for the Day
Connections to Previous Learning
Homework Review
Teach New Material
2. Application (40-45 mins.)

3. Synthesis (15-20 mins.)

Assessment
Re-teaching
Dstablish Connections and Relevance


Closure

## Application Phase

I. Cooperative Learning
II. Paideia Seminars
III. Laboratory
IV. Simulation
v. Models of Teaching
A. Concept Development
B. Inquiry
C. Concept Attainment
D. Synectics
VI. Learning Centers or Stations
VII. Technology
VIII. Content Area Literacy Strategies


## Research Regarding the General Effects of Engagement on Achievement

| Synthesis | Number of | Average | Percentile |
| :---: | :---: | :---: | :---: |
| Study | Effect Sizes | Effect Size | Gain |

Bloom, 1976
28
0.75

27

Frederick, 1980
20
0.82

29

Lysakowski \&
Wahlberg, 1982
22
0.88

31

Wahlberg, 1982
10
0.88

31

## Stimuli for Student Engagement

-High Energy
$\square$ Missing Information
-Self
-Mild Pressure
-Mild Controversy and Competition

## High Energy as Stimulus

- Movement
-Lesson Pacing (especially smooth transitions)
$\square$ Teacher Enthusiasm and Intensity


## Missing Information as Stimulus

■Mysteries (Puzzles, riddles, etc.)
-Inquiry Lessons
$\square$ Directed Reading (or Listening) Thinking Activities (DRTA, DLTA)

## Self as Stimulus

-Student Interests
-Student Choices
-Material Relevant to Current Existence

## Mild Pressure as Stimulus

$\square$ Appropriate level of pressure
$\square$ Questioning techniques including "wait time" and individual response boards
$\square$ Intellectual Challenge

- Key: Pressure that is too intense or too long will cause stress that has a negative impact on learning and well-being.


## Mild Controversy and Competition as Stimuli

$\square$ Games/Contests
$\square$ Seminars
$\square$ Discussions
$\square$ Debates

- Key: Controversy must not be too "controversial."

Competition must not be too intense. Losing teams and/or individuals must not feel devalued.

## How to Fail When Implementing a New Schedule

I. Mess-up the Process
A. Don't identify the goals.
B. Start with an administrative edict.
C. Let the study committee dominate.
D. Don't involve the parents.
E. Don't involve the students.
F. Don't involve the central office.
G. Don't involve the union.

## How to Fail When Implementing a New Schedule con't.

H. Do an incomplete study.

1. Don't read and do research.
2. Don't visit other schools.
3. Don't do a mock master schedule.
4. Don't create sample teacher and student schedules.
5. Don't address benefits for both students and teachers.

## How to Fail When Implementing a New Schedule con't.

II. Do Poor Planning
A. Don't create pacing guides.
B. Assume teachers will change instruction to fit the block without staff development assistance.
C. Don't change school policies to be in line with the new schedule.

## How to Fail When Implementing a New

 Schedule con't.III. Create a Poorly Constructed Schedule
A. Don't balance teams academically.
B. Make sure you have unequal class times.
C. Create short chunks of unusable time.
D. Create split periods to run lunch.
E. Make sure students can't take (fill in the blank) "because of the schedule."
Iv. Don't Continue to do Staff Development After the first year.
v. Don't Plan to Evaluate until Someone Asks for It.

## References

- Ball, W. H. and Brewer, P. F. (2000). Socratic seminars in the block. Larchmont, NY. Eye On Education.
- Blaz, D. (1998). Teaching foreign languages in the block. Larchmont, NY: Eye on Education.
- Canady, R. L. \& Rettig, M. D. (Eds.) (1996). Teaching in the block: Strategies for engaging active learners. Larchmont, NY: Eye On Education.
- Canady, R. L. \& Rettig, M. D. (1995). Block scheduling: A catalyst for change in high school. Larchmont, NY: Eye on Education.
- Conti-D'Antonio, M., Bertrando, R. and Eisenberger, J. (1998). Supporting students with learning needs in the block. Larchmont, NY: Eye on Education.
- Gilkey, S. N. and Hunt, C. H. (1998). Teaching mathematics in the block. Larchmont, NY: Eye on Education.
- Marzano, R. J. (2003). What works in schools: Translating research into action. Alexandria,VA: ASCD.


## References con't.

- Pettus, A. and Blosser, M. (2001). Teaching science in the block. Larchmont, NY. Eye On Education.
- Rettig, M. D. (2006). Directory of high school scheduling models in Virginia. A report of the "Study of innovative high school scheduling in Virginia". Harrisonburg, VA: James Madison University, http://coe.jmu.edu/ EdLeadership/index2.htm.
- Rettig, M. D. \& Canady, R. L. (2000). Scheduling strategies for middle schools. Larchmont, NY: Eye On Education.
- Rettig, M. D. \& Canady, R. L. (1998). High failure rates in required mathematics courses: Can a modified block schedule be part of the cure? NASSP Bulletin, 82(596), 56-65.
- Rettig, M. D., McCullough, L. L., Santos, K.E., and Watson, C.R. (2004). From rigorous standards to student achievement: A practical process. Larchmont, NY: Eye on Education.
- Strzepek, J. E., Newton, J., and Walker, L. D. (2000). Teaching English in the block. Larchmont, NY: Eye On Education.
- Zepeda, S.J, \& Mayers, R.S. (2006). An analysis of research on block scheduling. Review of Educational Research 76 (1), 137-170.

