



# **Sleep and School Start Time Committee Study: The Complete Process**

**Anthony P. Rybarczyk,  
Ed. D.  
February 27, 2020**

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# My Purpose and Resume

- Once an adolescent
- Educator
- Believe in the Science
- Father to 7 children
  - 4 of 7 adolescents
- Chair of now my second Sleep and School Start Time Study
- Multiple presentations to School Boards, Superintendents, Teachers and Community members

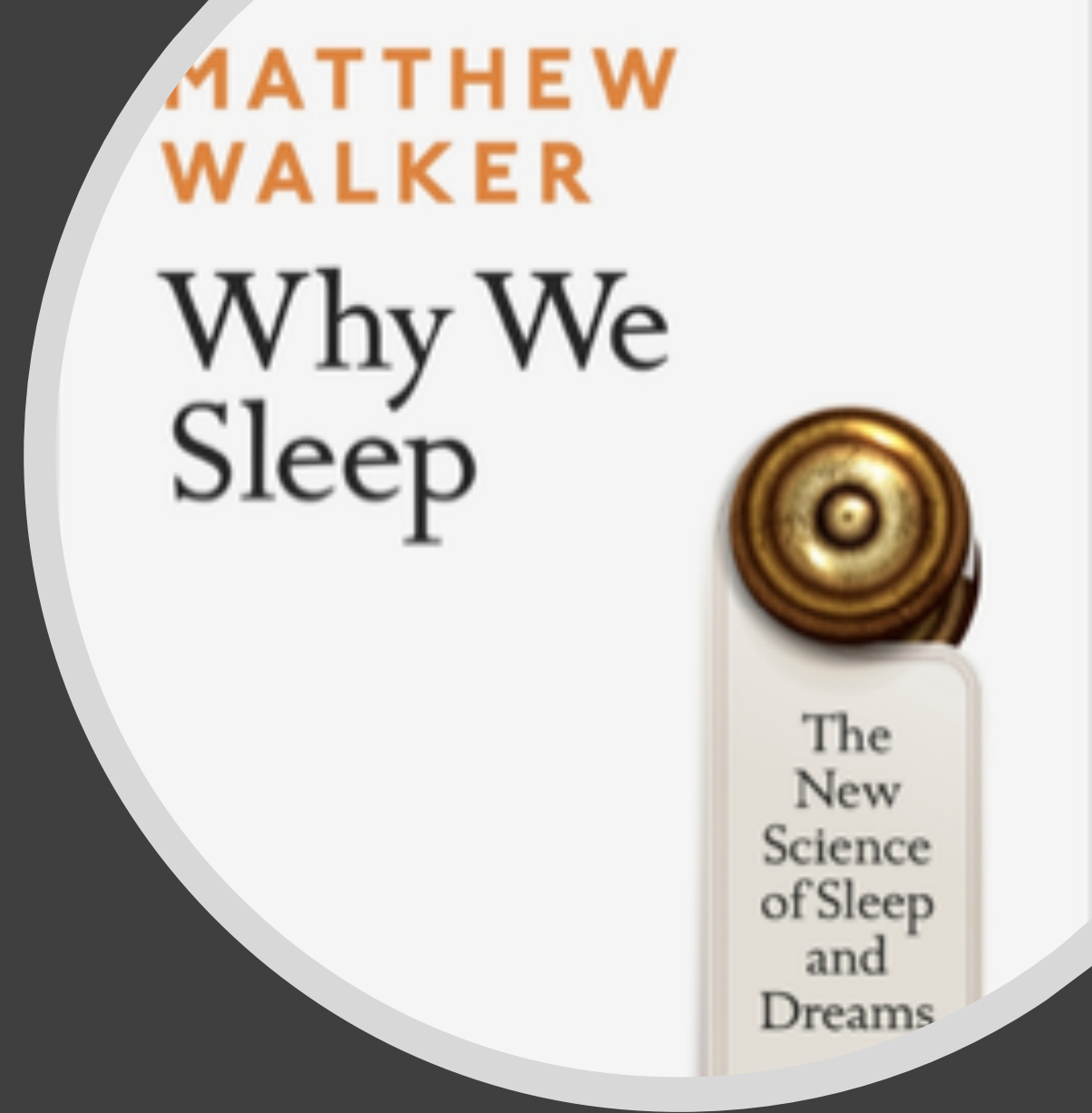


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# The Science and Research: Just a couple of examples

- University of Washington
  - [https://www.youtube.com/watch?time\\_continue=119&v=79-sLhRfoXE&feature=emb\\_title](https://www.youtube.com/watch?time_continue=119&v=79-sLhRfoXE&feature=emb_title)
- University of Minnesota
  - <https://www.youtube.com/watch?v=ugBOwLPbC1I>
- Dr. Wendy Troxell
  - <https://www.youtube.com/watch?v=TS6IFDVR-3g>
- Dr. Judith Owens
  - <https://www.youtube.com/watch?v=SpCcAA2T75Q>



# Timelines / Effective and Constant Communication

- Timelines
- Website
  - Committee Meeting Updates
  - Resources
  - List of Committee Members
  - Events
  - Proposals
- Forums (Student, Parent and Staff)
- Media
- Board Updates (Committee and Regular Meetings)





# November 29, 2017 - November 13, 2018

November 29, 2017 - November 13, 2018												
<p><b>Dec. 14, 2017</b> Meeting of the Adolescent Sleep and School Start Time Committee: Members separate into subcommittees focused on areas of study such as Academics and Transportation</p>	<p><b>Jan. 11, 2018</b> Meeting of Adolescent Sleep and School Start Time Committee: Review of RTSD mission statement and purpose of committee; discussion about research and possible impacts on community; identification of questions for FAQ and pros and cons of a later school start time; discussion of other strategies that address student sleep</p>	<p><b>Feb. 22, 2018</b> Meeting of Adolescent Sleep and School Start Time Committee: Final review of Teen Sleep Habits Survey; review of FAQs; break-out groups discuss scenarios: no later start time/plan to address student sleep needs and later school start time/associated logistics</p>	<p><b>March 14-28, 2018</b> Teen Sleep Habits Survey given to RHS students in English classes</p>	<p><b>April 26, 2018</b> Meeting of Sleep and School Start Time Committee: Overview of progress to date; review of Teen Health Habits Survey data; determination to evaluate at least four options ranging from no change in school start time to a 90-minute adjustment</p>	<p><b>May 7, 2018</b> Meeting of Adolescent Sleep and School Start Time Committee: Evaluation of different start time scenarios; discussion of items impacted by a change in start time, including transportation, schedules, sports, community youth sports, and clubs/activities</p>	<p><b>May 21, 2018</b> Meeting of Adolescent Sleep and School Start Time Committee: Decision made to ask RHS and RTSD administrators to follow up to evaluate the scenarios to determine impact on RTSD as well as community as a whole</p>	<p><b>August 28, 2018</b> School Board Business Meeting: Presentation on progress and next steps for the Adolescent Sleep and School Start Time Committee as part of larger presentation on the 2017-18 RTSD Goals and Priority Projects</p>	<p><b>Week of Sept. 10, 2018</b> Discussions with RTSD school administrators regarding impact of possible time change on all District schools</p>	<p><b>Oct. 8, 2018</b> Draft of Adolescent Sleep and School Start Time Committee Report and Initial Recommendation made available to members of Adolescent Sleep and School Start Time Committee for review prior to Oct. 10 meeting.</p>	<p><b>Nov. 1, 2018</b> Meetings with RTSD staff members to review and discuss Adolescent Sleep and School Start Time Committee Report and Initial Recommendation</p>	<p><b>Nov. 8, 2018</b> Meetings with RHS students to discuss Adolescent Sleep and School Start Time Committee Report and Initial Recommendation</p>	<p><b>Nov. 13, 2018</b> Curriculum Committee Meeting of the Whole School Board: Adolescent Sleep and School Start Time Committee Report and Initial Recommendation presented</p>
<p><b>Nov. 29, 2017</b> First meeting of the Adolescent Sleep and School Start Time Committee: Introduction of members; review of the RTSD mission statement; discussion about committee's purpose; and initial work to establish study areas</p>	<p><b>Jan. 25, 2018</b> Meeting of the Adolescent Sleep and School Start Time Committee: Members of RASNC discuss the organization's background and guiding principles and conduct Q&amp;A. Committee members review questions for a Teen Sleep Habits survey for RHS students, develop FAQs, and receive an update on the creation of dedicated website and email address</p>	<p><b>March 12 &amp; 14, 2018</b> Pediatric sleep expert Dr. Wendy Troxel visits RTSD to present to area parents and community members (March 12) and RHS students in grades 9-12 (March 14)</p>	<p><b>April 12, 2018</b> Meeting of the Adolescent Sleep and School Start Time Committee: Update from RASNC regarding a webinar with Dr. Ali Haghani, an expert in the field of transportation, in which committee members participated; overview of Teen Sleep Habits Survey, which was completed by 848 RHS students; further discussion on start time scenarios</p>	<p><b>May 8, 2018</b> Curriculum Committee Meeting of the Whole School Board: Presentation on the progress of the Adolescent Sleep and School Start Time Committee, including purpose of committee; objectives of the study; summary of meetings and events; summary of results of the Teen Sleep Habits Survey; and next steps</p>	<p><b>Week of August 27, 2018</b> Meetings held with RTSD Transportation Department to evaluate all start time scenarios</p>	<p><b>Sept. 7, 2018</b> Timeline developed for release of final Adolescent Sleep and School Start Time Committee proposal on whether a later school start time in RTSD is feasible and recommended. <b>Initial Recommendation is subject to a vote by the School Board prior to any action (scheduled for Spring 2019)</b></p>	<p><b>Sept. 11, 2018</b> Curriculum Committee Meeting of the Whole School Board: Adolescent Sleep and Start Time listed as a "Priority Project" on proposed district Goals and Priority Projects for 2018-19</p>	<p><b>Oct. 10, 2018</b> Meeting of Adolescent Sleep and School Start Time Committee: Review of draft Adolescent Sleep and School Start Time Committee Report and Initial Recommendation</p>	<p><b>Nov. and Dec. 2018</b> Feedback sessions on Adolescent Sleep and School Start Time Report with staff at each school building and Radnor High School students</p>	<p><b>Nov. 9, 2018</b> Adolescent Sleep and School Start Time Report and Initial Recommendation made available to School Board and public</p>		

## The Science and Purpose of the Study

- Science has already been proven
- Determining the impact on your community
- Educating all stakeholders
- The barriers of making a change
- Once a decision has been made...refine it but don't rehash it!
- Recommendation to the School Board



got purpose?

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## WHY CHANGE? SCIENTIFIC EVIDENCE ON ADOLESCENT SLEEP NEED AND CIRCADIAN RHYTHM

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- Adolescents need 8-10 hours of sleep per night to achieve optimal health [American Academy of Pediatrics (AAP); National Sleep Foundation (NSF); Center for Disease Control (CDC); American Academy of Sleep Medicine (AASM)]
- Circadian rhythms are delayed, making it extremely difficult for teens to fall asleep prior to 11 p.m. and wake up prior to 8 a.m.
- Many concerned parents/guardians and community members want to know: ***How can our adolescents be getting enough sleep?***

# ***Why Change?* Scientific Evidence That Insufficient Sleep Adversely Affects Teens**

<b>Health</b>	<ul style="list-style-type: none"><li>• Depressed Mood</li><li>• Anxiety</li><li>• Suicidal Ideation</li><li>• Decreased Emotional Regulation</li><li>• Increased Weight Gain and Obesity</li><li>• Increased Substance Use and Abuse</li></ul>
<b>Safety</b>	<ul style="list-style-type: none"><li>• Increased Motor Vehicle Crashes</li><li>• Increased Athletic Injuries</li><li>• Increased Risk-Taking Behaviors</li><li>• Increased Physical Fights/Bullying</li></ul>
<b>Performance</b>	<ul style="list-style-type: none"><li>• Decreased Concentration</li><li>• Decreased Problem-Solving Ability</li><li>• Difficulty with Memory</li><li>• Poorer Cognitive Efficiency</li><li>• Decline in Academic Performance</li></ul>

*Owens J. Adolescent Sleep Working Group; Committee on Adolescence. Insufficient sleep in adolescents and young adults: an update on causes and consequences Pediatrics. 2014;134:e921–e932; <https://www.cdc.gov/healthyschools/sleep.htm>; Fitzgerald CT; Messias E; Buysse DJ. Teen sleep and suicidality: results from the youth risk behavior surveys of 2007 and 2009. J Clin Sleep Med 2011;7(4):351-356.]*



## Bell Schedule

- Start with your High School Schedule
  - Can it be adjusted without lengthening the day
    - Travel time
    - Lunches
    - Homeroom
- Impact on Middle School and Elementary Schedules
  - Starting them earlier or later
  - Sibling care
  - Daycare
  - Jobs

	Thursday October 27	Friday October 28	Saturday October 29	Sunday October 30	Monday October 31	
8:00						8:00
8:30		Opening Ceremony			Kickoff	8:30
9:00		Travel to rooms			Finalist Presentations	9:00
9:30		Presentation Sessions	Presentation Sessions	Presentation Sessions	IGEM from Above	9:30
10:00						10:00
10:30		Break	Break	Break	Finalist Presentations	10:30
11:00		Presentation Sessions	Presentation Sessions	Presentation Sessions	Refreshment Break	11:00
11:30						11:30
12:00					Awards Ceremony	12:00
12:30		Lunch	Lunch	Lunch		12:30
1:00						1:00
1:30						1:30
2:00		Presentation Sessions	Presentation Sessions	Presentation Sessions		2:00
2:30						2:30
3:00		Break	Break	Break		3:00
3:30						3:30
4:00		Presentation Sessions	Presentation Sessions	Presentation Sessions		4:00
4:30						4:30
5:00		Workshops	Workshops	FBI Talk		5:00
5:30						5:30
6:00		Poster Session	Poster Session	Poster Session		6:00
6:30						6:30
7:00						7:00
7:30				Travel time		7:30
8:00						8:00
8:30				Social Events		8:30

# Current Bell Schedule\*

Level	Start Time	End Time	Length of Day
High	7:35 a.m.	2:27 p.m.	6 hours 52 mins
Middle	8:00 a.m.	3:00 p.m.	7 hours
Elementary	9:00 a.m.	3:30 p.m.	6 hours 30 mins

*\*A school's "bell schedule" starts when students begin their first period of the school day and ends at the conclusion of the last period.*

**RADNOR HIGH SCHOOL  
PROPOSED BELL SCHEDULE**

**8 Period Days (Mondays, Tuesdays, Fridays)**

	<u>Begin</u>	<u>End</u>			
Homeroom	8:30 AM	8:36 AM			
Period 1	8:40 AM	9:21 AM			
Period 2	9:25 AM	10:06 AM			
Period 3	10:10 AM	10:51 AM			
A	10:55 AM	11:25 AM	A Lunch	Period A4	Period A4
Period 4	11:29 AM	11:36 AM	Period 4B	B Lunch	Period B5
B	11:40 AM	12:10 PM	Period 5C	Period 5C	C Lunch
Period 5	12:14 PM	12:21 PM			
C	12:25 PM	12:55 PM			
Period 6	12:59 PM	1:40 PM			
Period 7	1:44 PM	2:25 PM			
Period 8	2:29 PM	3:10 PM			

*On 8 period days, lunch is assigned and appears on student schedules.*

**BOLD** times indicate when bells will ring

**RADNOR HIGH SCHOOL  
PROPOSED BELL SCHEDULE**

**4 Block Days (Wednesdays, Thursdays)**

	<u>Begin</u>	<u>End</u>	
Homeroom	8:30 AM	8:36 AM	
Block 1 or 2	8:40 AM	10:00 AM	
Community Pd.	10:04 AM	10:24 AM	
A	10:28 AM	10:58 AM	Lunch
Block 3 or 4	11:02 AM	11:07 AM	
B	11:10 PM	11:40 PM	Block 3 or 4
Block 3 or 4	11:43 PM	11:48 PM	
C	11:52 PM	12:22 PM	
Block 5 or 6	12:26 PM	1:46 PM	
Block 7 or 8	1:50 PM	3:10 PM	

*On block days, 3rd or 4th period classes will be designated for specific lunches.*

**BOLD** times indicate when bells will ring

**RMS Bell Schedule 2018-2019**

	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade
Advisory	8:00-8:35	8:00-8:35	8:00-8:35
Period 1	8:38 – 9:25 ENCORE	8:38– 9:25	8:38– 9:25
Period 2	9:28 – 10:15	9:28 – 10:15 ENCORE	9:28 – 10:15
Period 3	10:18-11:05	10:18-11:05 ENCORE	10:18-11:05
Period 4	11:08 – 11:55 ENCORE	11:08 – 11:55	11:07 – 11:37 LUNCH
Period 5	11:57 – 12:27 LUNCH	11:58 – 12:45	11:39 – 12:26
Period 6	12:29 – 1:16	12:47 – 1:17 LUNCH	12:29 – 1: 16 ENCORE
Period 7	1:19 – 2:06	1:19 – 2:06	1:19 – 2:06 ENCORE
Period 8 *Extended Learning Time (ELT) and SOS	2:09-3:00 Days 1&5 Pd. 2	2:09-3:00 Days 2&6 Pd. 3	2:09-3:00 Days 3&7 Pd. 6
	2:09-3:00 Days 4&8 Pd. 7	2:09-3:00 Days 1&5 Pd. 1	2:09-3:00 Days 2&6 Pd. 4
	2:09-3:00 Days 3&7 Pd. 5	2:09-3:00 Days 4&8 Pd. 7	2:09-3:00 Days 1&5 Pd. 1
	2:09-3:00 Days 2&6 Pd. 2	2:09-3:00 Days 3&7 Pd. 3	2:09-3:00 Days 4&8 Pd. 5

\*Extended Learning Time – Students should report to the class period listed based on the daily cycle day.

\*\*Core and Encore classes are 47 minutes

*The proposed Final School Start Time Recommendation reduces the length of the middle school day by 10 minutes. RMS administration will convene a committee to develop a new RMS schedule should the final recommendation be approved.*

A row of yellow school buses parked in a lot. The buses are yellow with black grilles and "SCHOOL BUS" signs on the roof. They are parked in a row, with the first bus on the left being partially cut off. The background is a cloudy sky.

# Transportation

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# Transportation

- Things to consider
  - # of runs
    - Ways to be more efficient
    - Contracting with a routing company to further study efficiencies
  - Private Schools
    - transfers
  - Right-sizing of fleet
    - Too many or not enough buses
    - Needing more drivers
    - Storage
  - Contracting when needed
    - Extra-curricular activities
    - Athletic events
    - Field trips







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# Athletics/Extra-Curricular Activities

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# Athletics

- Things to consider
  - Time of practices
    - Length
    - What time of day
  - Time of competitions
    - Daylight
    - Venues that control schedule
    - Travel for away competitions
  - Use of fields
    - Youth sports
    - Community sports
  - Lights on fields
    - After school to evening practices/coemptions
  - After-school sports vs. evening sports





Options: have  
them!

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# Overview of Proposed School Schedule Options – Presented on November 13, 2018

School Schedule Options	Sleep Wellness Education?	Radnor High School Start Time	Radnor High School End Time	Elementary School Start Time	Elementary School End Time	Radnor Middle School Schedule Change?	Additional Buses Needed?	Impact to Radnor High School Sports?	Meets Medical Organizations' Recomms.?
<b>No Change</b> (Option 1)	Yes	7:35 AM	2:27 PM	9 AM	3:30 PM	No	No	No	No
<b>25-Min Delay at RHS</b> (Option 2)	Yes	8 AM	2:34 PM	9 AM <i>(If two-tier busing model implemented)</i>	3:30 PM <i>(If two-tier busing model implemented)</i>	No	TBD	No	No
<b>55-Min Delay at RHS*</b> (Option 3)	Yes	8:30 AM	3:04 PM	9:15 AM	3:45 PM	No	TBD	Yes, Minimal	Yes
<b>85-Min Delay at RHS</b> (Option 4)	Yes	9 AM	3:34 PM	8:30 AM or 9:30 AM	3 PM or 4 PM	No	TBD	Yes, High	Yes

# Initial Recommendation

- Does not mean final recommendation
  - Board feedback
  - Student feedback
  - Community feedback
  - Any and all other feedback
- Process of meeting with ALL stakeholders starts all over again
  - Forums
  - Student input groups
  - Parent input groups
  - Teacher input groups
  - More education (Dr. Owens)





# Initial Recommendation Offered on Nov. 13, 2018:

## Delay Radnor High School Start By 55 Minutes

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:04 p.m.	6 hours 34 mins
Middle	8:00 a.m.	3:00 p.m.	7 hours
Elementary	9:15 a.m.	3:45 p.m.	6 hours 30 minutes

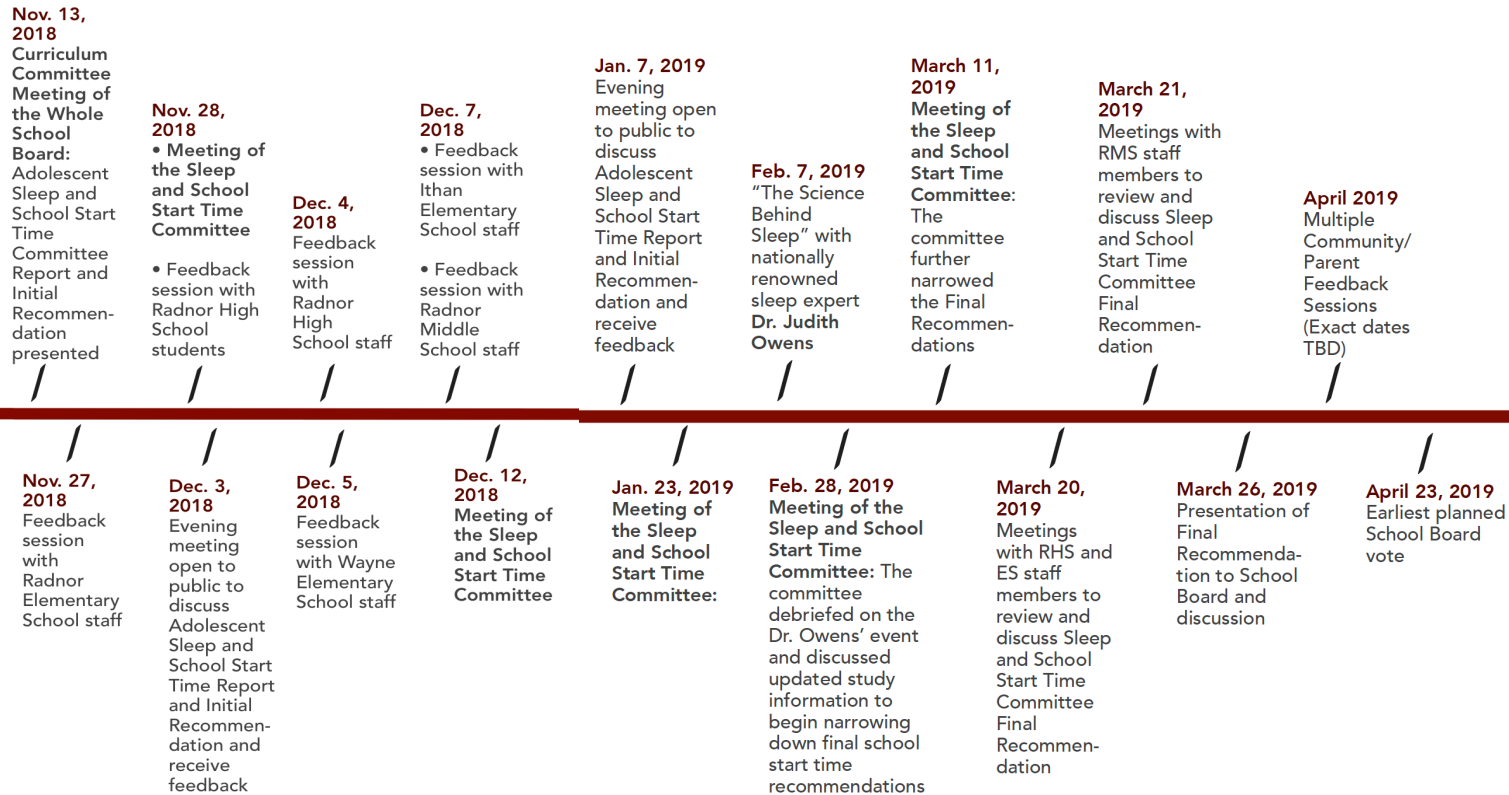
**WHY DEVELOPED** Allowed high school students to go to school 55 minutes later, which meets sleep recommendations put forth by major medical organizations. Also did not impact RMS schedule.

**WHY ELIMINATED**

- Subsequent research after recommendation regarding transportation led to determination that option would require a minimum of 8 additional buses and 8 additional drivers as well as contracted athletic transportation.
  - Est. cost \$1.12 million
- Subsequent parent feedback after recommendation regarding concerns with RHS and RMS students being required to ride the same bus
- Subsequent teacher and parent feedback concerning 15-minute later start and end times for elementary students

**Current Schedule**  
RHS: 7:35 a.m.-2:27 p.m.  
RMS: 8:00 a.m.-3:00 p.m.  
ES: 9:00 a.m.-3:30 p.m.

# November 13, 2018 - April 23, 2019



Put all options  
on the table!

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# Additional Options Explored Based on Feedback: Elementary Starting First

Level	Start Time	End Time	Length of Day
High	8:15 a.m.	2:45 p.m.	6 hours 30 mins
Middle	8:45 a.m.	3:30 p.m.	6 hours 45 mins
Elementary	7:45 a.m.	2:15 p.m.	6 hours 30 mins

**WHY DEVELOPED** Feedback from elementary teachers indicated the initial recommendation of a 3:45 p.m. end time for elementary students was too late when considering the educational and developmental needs of younger students. A schedule option with earlier elementary start and end times was thus developed.

## **WHY ELIMINATED**

- Parent concerns about elementary students waiting for buses in the morning during civil twilight
- Parent concerns about the possibility of the need for additional after-school care
- Does not meet the sleep recommendations for high school students per major medical organizations
- Parents felt this schedule might be shifting a sleep issue from one age group to another and negatively impact the elementary level
- Would require 4 additional buses and 4 additional bus drivers
  - Est. cost \$560,000
- Impact on RMS athletic competitions

### **Current Schedule**

RHS: 7:35 a.m.-2:27 p.m.

RMS: 8:00 a.m.-3:00 p.m.

ES: 9:00 a.m.-3:30 p.m.

# Additional Options Explored Based on Feedback:

## Concurrent Start for High and Middle School

Level	Start Time	End Time	Length of Day
High	8:15 a.m.	2:45 p.m.	6 hours 30 mins
Middle	8:15 a.m.	3:10 p.m.	7 hours
Elementary	9:00 a.m.	3:30 p.m.	6 hours 30 mins

### **WHY DEVELOPED:**

- *Concurrent two-tier bus runs in the morning would avoid the necessity to expand cost of contracted athletic busing*
- *Both RHS and RMS start later*

### **WHY ELIMINATED:**

- *Completed research regarding transportation led to determination that option would require a minimum of 8 additional buses and 8 additional drivers*
  - *Est. cost \$1.12 million*
- *RHS and RMS students would be required to ride the same bus in morning*
- *RHS start time does not meet sleep recommendations from major medical organizations*

#### **Current Schedule**

*RHS: 7:35 a.m.-2:27 p.m.*

*RMS: 8:00 a.m.-3:00 p.m.*

*ES: 9:00 a.m.-3:30 p.m.*



# Additional Options Explored Based on Feedback:

## "Push" Start Time 20 Minutes at Each School

Level	Start Time	End Time	Length of Day
High	7:55 a.m.	2:47 p.m.	6 hours 52 mins
Middle	8:20 a.m.	3:20 p.m.	7 hours
Elementary	9:20 a.m.	3:50 p.m.	6 hours 30 mins

### WHY DEVELOPED:

- *Maintains three-tier busing system and does not increase contracted services for busing to RHS athletic competitions*
- *Option mirrors later school start time schedules put into place by other districts (Phoenixville, Unionville, under consideration in Tredyffrin-Easttown)*

### WHY ELIMINATED:

- *RHS start time does not meet sleep recommendations from major medical organizations*
- *Significant impact to RMS athletics*
- *Would require 1 additional bus and 1 additional driver*
  - *Est. cost \$140,000*
- *Later end to elementary school day would results in some students getting home close to 4:45 p.m. or later*

#### Current Schedule

*RHS: 7:35 a.m.-2:27 p.m.*

*RMS: 8:00 a.m.-3:00 p.m.*

*ES: 9:00 a.m.-3:30 p.m.*

# Additional Options Explored Based on Feedback: "Flip" Elementary and Secondary Start Times

Level	Start Time	End Time	Length of Day
High	8:40 a.m.	3:15 p.m.	6 hours 35 mins
Middle	9:10 a.m.	4:00 p.m.	6 hours 50 mins
Elementary	8:00 a.m.	2:30 p.m.	6 hours 30 mins

## **WHY DEVELOPED:**

- Maintains three-tier busing system and does not increase contracted services for busing to RHS athletic competitions
- Both RHS and RMS start times exceed sleep recommendations from major medical organizations
- Feedback from elementary teachers indicated the initial recommendation of a 3:45 p.m. end time for elementary students was too late when considering the educational and developmental needs of younger students. A schedule option with earlier elementary start and end times was thus developed.

## **WHY ELIMINATED:**

- Significant impact to RMS athletics with 60-minute later end time
- Middle school students would arrive home late in day
- Would require minimum of 4 additional buses and 4 additional drivers
  - Est. cost \$560,000
- Significant impact on before- and after-school care, with the possibility of more parents needing care in the afternoon
- Impact on township youth sports program held at RMS
- Major schedule shift for elementary and middle school families
- Most disruptive change for families at all levels of all schedules considered

### **Current Schedule**

RHS: 7:35 a.m.-2:27 p.m.

RMS: 8:00 a.m.-3:00 p.m.

ES: 9:00 a.m.-3:30 p.m.





Have an  
end point!

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# Final Recommendation: "Secondary Shuffle"

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:10 p.m.	6 hours 40 mins
Middle	7:50 a.m.	2:40 p.m.	6 hours 50 mins
Elementary	9:07 a.m.	3:40 p.m.	6 hours 33 mins

# Final Recommendation: "Secondary Shuffle"

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:10 p.m.	6 hours 40 mins
Middle	7:50 a.m.	2:40 p.m.	6 hours 50 mins
Elementary	9:07 a.m.	3:40 p.m.	6 hours 33 mins

## **WHY DEVELOPED:**

- *Maintains three-tier busing system and does not increase contracted services for busing to RHS athletic competitions*
- *RHS start time meets sleep recommendations from major medical organizations*
- *Minimal impact on both middle and elementary school schedules*

## **WHY RECOMMENDED:**

- *Three-tier busing ensures separate bus rides for RHS and RMS students*
- *Addresses parent concerns regarding elementary students going to school too early*
- *One of the most cost-effective options: 0-2 buses and 2 bus drivers needed*
  - *Est. cost \$120,000*
  - *Right-sizing current bus fleet*
- *Does not expand on busing costs for RHS athletics in the afternoon*
- *Does not negatively impact scheduling of RMS athletic competitions*



# Final Recommendation: "Secondary Shuffle"

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:10 p.m.	6 hours 40 mins
Middle	7:50 a.m.	2:40 p.m.	6 hours 50 mins
Elementary	9:07 a.m.	3:40 p.m.	6 hours 33 mins

## Transportation Information

Earliest Pick-Up Time from Home Bus Stop (Morning)	Approximate Latest Bus Pick-Up Times at School (Afternoon)	Current Average Bus Ride	Average Bus Rides Under Final Recommendation
Current Schedule <ul style="list-style-type: none"><li>RHS: 6:40 a.m.</li><li>RMS: 7:09 a.m.</li><li>ES: 8:12 a.m.</li></ul>	Current Schedule <ul style="list-style-type: none"><li>ES: 3:45 p.m.</li></ul>	RHS AM = 26 minutes	RHS AM = 28 minutes
Under Final Recommendation <ul style="list-style-type: none"><li>RHS: 7:38 a.m.</li><li>RMS: 7:04 a.m.</li><li>ES: 8:15 a.m.</li></ul>	Under Final Recommendation <ul style="list-style-type: none"><li>ES: 3:52 p.m.</li></ul>	RHS PM = 24 minutes	RHS PM = 24 minutes
Approximate Bus Drop-Off Times at School (Morning)	Latest Drop-Off Times from School to Bus Stop (Afternoon)		
Current Schedule <ul style="list-style-type: none"><li>RHS: 7:03-7:18 a.m.</li><li>RMS: 7:35-7:55 a.m.</li><li>ES: 8:45-8:55 a.m.</li></ul>	Current Schedule <ul style="list-style-type: none"><li>ES: 4:23 p.m.</li></ul>	RMS AM = 36 minutes	RMS AM = 25 minutes
Under Final Recommendation <ul style="list-style-type: none"><li>RHS: 8:05-8:20 a.m.</li><li>RMS: 7:25-7:40 a.m.</li><li>ES: 8:50-9:00 a.m.</li></ul>	Under Final Recommendation <ul style="list-style-type: none"><li>ES: 4:30 p.m.</li></ul>	RMS PM = 26 minutes	RMS PM = 27 minutes
		IES AM = 30 minutes	IES AM = 28 minutes
		IES PM = 28 minutes	IES PM = 30 minutes
		RES AM = 28 minutes	RES AM = 28 minutes
		RES PM = 29 minutes	RES PM = 29 minutes
		WES AM = 22 minutes	WES AM = 22 minutes
		WES PM = 25 minutes	WES PM = 25 minutes

# Final Recommendation: "Secondary Shuffle"

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:10 p.m.	6 hours 40 mins
Middle	7:50 a.m.	2:40 p.m.	6 hours 50 mins
Elementary	9:07 a.m.	3:40 p.m.	6 hours 33 mins

## ***ADDRESSING FEEDBACK RECEIVED AND RESEARCH CONDUCTED:***

- Homework will be reviewed as part of the RTSD Wellness Study
- Includes retention of Community Period at current time in the RHS bell schedule
- Includes retention of Homeroom at RHS
- Includes scheduling of "Fitness for Athletes" at the end of the RHS school day to mitigate lost instruction
- Three-tier busing ensures separate bus rides for RHS and RMS students
- Addresses parent concerns regarding elementary students going to school too early
- Maintains before-school sports practices at RHS while allowing for more sleep for participating student-athletes
- Contains metrics for evaluating the proposed start times and effect on student well being
- Establishes more efficient bus routes
- Reduces time in RHS bell schedule without reducing instructional time
- Provides RTSD the opportunity to have one-hour delays instead of two-hour delays for inclement weather
- Includes establishment of healthy guidelines in use of technology

# CURRENT BELL SCHEDULE

Level	Start Time	End Time	Length of Day
High	7:35 a.m.	2:27 p.m.	6 hours 52 mins
Middle	8:00 a.m.	3:00 p.m.	7 hours
Elementary	9:00 a.m.	3:30 p.m.	6 hours 30 mins

## INITIAL RECOMMENDED BELL SCHEDULE (11/13/18)

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:04 p.m.	6 hours 34 mins
Middle	8:00 a.m.	3:00 p.m.	7 hours
Elementary	9:15 a.m.	3:45 p.m.	6 hours 30 mins

## FINAL RECOMMENDED BELL SCHEDULE (3/26/19)

Level	Start Time	End Time	Length of Day
High	8:30 a.m.	3:10 p.m.	6 hours 40 mins
Middle	7:50 a.m.	2:40 p.m.	6 hours 50 mins
Elementary	9:07 a.m.	3:40 p.m.	6 hours 33 mins

### Difference in TOTAL MINUTES from Current Bell Schedule

- High School: -18 mins
- Middle School: 0 mins
- Elementary: 0 mins

### Difference in START TIME in Minutes from Current Bell Schedule

- High School: +55 mins
- Middle School: 0 mins
- Elementary: +15 mins

### Difference in END TIME in Minutes from Current Bell Schedule

- High School: +37 mins
- Middle School: 0 mins
- Elementary: +15 mins

### Difference in TOTAL MINUTES from Current Bell Schedule

- High School: -12 mins
- Middle School: -10 mins
- Elementary: +3 mins

### Difference in START TIME in Minutes from Current Bell Schedule

- High School: +55 mins
- Middle School: -10 mins
- Elementary: +7 mins

### Difference in END TIME in Minutes from Current Bell Schedule

- High School: +43 mins
- Middle School: -20 mins
- Elementary: +10 mins

# IN MY OPINION...



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Be prepared once  
a decision has  
been made!

- How to Make School Start Later: Early-morning high school clashes with
- teenage biology, but change is hard
- By; Danielle Dreilinger
- <https://www.educationnext.org/how-to-make-school-start-later-early-morning-high-school-clashes-teenage-biology-change-hard/>



# Develop Effective Metrics

METR  
TOOL

# Metric for Evaluation: "Secondary Shuffle"

*Members of the administration reached out to both Unionville-Chadds Ford and State College Area school districts to gather information as to how they are evaluating the change to their school schedules. Based on the information that was shared, RTSD plans to take the following steps:*

- *Student survey data*
  - *May of each year*
- *Parent survey data*
  - *May of each year*
- *RHS Student and Parent focus groups*
  - *Several meetings throughout the year*
- *Ongoing collection of feedback using email*
  - [sleep@rtsd.org](mailto:sleep@rtsd.org)
- *Visits to the Nurse*
- *Attendance data: absences and tardiness*
- *Social Worker/School Psychologist referrals, both pre- and post-change*
- *Athletic injuries, including concussions*
- *School Climate Survey*
  - *Annually*
- *Review of historical Pennsylvania Youth Survey (PAYS) data*
  - *Every two years*






# Reasons for Change

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# ***Why Change?*** Delayed School Start Times Associated with Positive Outcomes

- *Increased sleep duration*
- *Fewer motor vehicle crashes*
- *Improved attendance*
- *Less tardiness*
- *Reduced daytime sleepiness*
- *Less falling asleep in class*
- *Fewer depressive symptoms*
- *Some evidence increase in GPAs, SATs; no adverse impact on academics*
- *Decreased health center visits*
- *Decrease athletic injuries*
- *Decrease in discipline referrals*



Ongoing  
Feedback: Even  
after a decisions  
been made

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**YOUR  
FEEDBACK  
MATTERS!**

# Community/Parent Feedback Sessions

- *April 2019 Community/Parent Feedback Sessions  
(Dates and Times to be determined)*
- *April 23, 2019 RTSD School Board Regular  
Business Meeting*

The background of the slide is a collage of various sticky notes. Some are yellow, some are olive green, and one is light blue. The notes contain handwritten questions in black ink: 'WHO?', 'WHAT?', 'WHERE?', 'How', and a large question mark. The notes are layered and slightly overlapping, creating a sense of depth. In the top left corner, there is a small, solid green horizontal bar.

# Questions or Comments?

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