



Community Forum: Adolescent Sleep and School Start Time

PENNBRIDGE HIGH SCHOOL LGI

DECEMBER 16, 2021

7:00 – 8:15 PM

What's all the fuss about?

- Adolescent sleep deprivation is a national epidemic: 73% of high school students do not meet the recommended minimum of 8 hours of sleep. (CDC 2018)
- Delayed shift in circadian rhythm (starting at puberty) makes it extremely difficult for students to fall asleep prior to 11 p.m.
- Alarms are waking students during critical REM sleep.
- Adolescents are chronically sleep deprived at a time when sleep is critical for their developing brain.

Scientific Evidence of Adverse Correlates of Insufficient Sleep in Teens

Health

depressed mood, anxiety, suicidal ideation
decreased emotional regulation
increased weight gain and obesity
increased substance and abuse

Safety

increased motor vehicle crashes
increased athletic injuries
increased risk-taking behaviors
increased physical fights/bullying

Performance

decreased concentration
decreased problem-solving ability
difficulty with memory
poorer cognitive efficiency
decline in academic performance

Four Options for Initial Recommendation

Option A	No Change
Option B	Half Hour Push: push the current start times for all schools by ½ hour
Option C	Flip H.S. and M.S. and maintain current 3 tier bussing
Option D	Late Adjusted NMS and HS transported together/CMS and SMS transporting separately

Option A: No Change

Maintain current bells times at all levels. The district would continue to encourage healthy sleep habits for all students.

Option A			
Level	Start Time	End Time	Length of Day
Elementary <ul style="list-style-type: none">Guth/SellersvilleOther buildings	8:35 AM	3:20 PM	6 hr, 45 min
	8:50 AM	3:35 PM	6 hr, 45 min
Middle	7:55 AM	2:55 PM	7 hr
High	7:15 AM	2:15 PM	7 hr

Option A: No Change

Average ride time for all students:

- 29 minutes in the AM
- 24 minutes in the PM

Currently 81 routes

Option will not require any additional vehicles/drivers

	Earliest Pick-up	Latest Drop-off	Shortest Route		Longest Route	
			AM	PM	AM	PM
Elementary	7:54 AM	4:30 PM	7 minutes	5 minutes	52 minutes	68 minutes
Middle School	6:54 AM	4:07 PM	13 minutes	8 minutes	60 minutes	76 minutes
High School	6:11 AM	3:21 PM	10 minutes	7 minutes	59 minutes	58 minutes

REGULAR DAY		
4 th PERIOD Lunch	6 TH PERIOD Lunch	8 TH PERIOD Lunch
1 st : 7:15 – 8:12 7:15 Pledge 8:07 Ramble or announcements AM Tech departs at 8:12	1 st : 7:15 – 8:12 7:15 Pledge 8:07 Ramble or announcements AM Tech departs at 8:12	1 st : 7:15 – 8:12 7:15 Pledge 8:07 Ramble or announcements AM Tech departs at 8:12
2 nd : 8:17 – 9:07	2 nd : 8:17 – 9:07	2 nd : 8:17 – 9:07
3 rd : 9:12 – 10:02	3 rd : 9:12 – 10:02	3 rd : 9:12 – 10:02
4 th Lunch: 10:02 – 10:33	4/5: 10:07 – 10:58 PM Tech departs at 10:58	4/5: 10:07 – 10:58 PM Tech departs at 10:58
5/6: 10:38 – 11:29	6 th Lunch: 10:58 – 11:29	6/7: 11:03 – 11:54
7/8: 11:34 – 12:25	7/8: 11:34 – 12:25	8 th Lunch: 11:54 – 12:25
9 th : 12:30 – 1:20 1:15-Announcements if needed	9 th : 12:30 – 1:20 1:15-Announcements if needed	9 th : 12:30 – 1:20 1:15-Announcements if needed
10 th : 1:25 – 2:15	10 th : 1:25 – 2:15	10 th : 1:25 – 2:15

Option A: No change
Current High School Schedule

Option B: Half-hour Push

This option would push all bell times by 30 minutes while keeping the same order of arrival and dismissal for each grade level.

Option B			
Level	Start Time	End Time	Length of Day
Elementary <ul style="list-style-type: none">Guth/SellersvilleOther buildings	9:05 AM	3:50 PM	6 hr, 45 min
	9:20 AM	4:05 PM	6 hr, 45 min
Middle	8:25 AM	3:25 PM	7 hr
High	7:45 AM	2:45 PM	7 hr

Option B: Half-hour Push

Average ride time for all students:

- 29 minutes in the AM
- 24 minutes in the PM

Minimal conflicts in this schedule

Should be able to maintain the 81 routes,
but will need to evaluate the non-pub
assignments to better determine needs

Option should not require any additional
vehicles/drivers

	Earliest Pick-up	Latest Drop-off	Shortest Route		Longest Route	
			AM	PM	AM	PM
Elementary	8:24 AM	5:00 PM	7 minutes	5 minutes	52 minutes	68 minutes
Middle School	7:24 AM	4:37 PM	13 minutes	8 minutes	60 minutes	76 minutes
High School	6:41 AM	3:51 PM	10 minutes	7 minutes	59 minutes	58 minutes

REGULAR DAY		
4 th PERIOD Lunch	6 TH PERIOD Lunch	8 TH PERIOD Lunch
1 st : 7:45 – 8:42 7:45 Pledge 9:07 Ramble or announcements AM Tech departs at 7:45	1 st : 7:45 – 8:42 7:45 Pledge 9:07 Ramble or announcements AM Tech departs at 7:45	1 st : 7:45 – 8:42 7:45 Pledge 9:07 Ramble or announcements AM Tech departs at 7:45
2 nd : 8:47 – 9:37	2 nd : 8:47 – 9:37	2 nd : 8:47 – 9:37
3 rd : 9:42 – 10:32	3 rd : 9:42 – 10:32 PM Tech departs at 10:37	3 rd : 9:42 – 11:32 PM Tech departs at 10:37
4 th Lunch: 10:32 – 11:03	4/5: 10:32 – 11:03	4/5: 10:37 – 11:28
5/6: 11:08 – 11:59	6 th Lunch: 11:08 – 11:59	6/7: 11:33 – 12:24
7/8: 12:04 – 12:55	7/8: 12:04 – 12:55	8 th Lunch: 12:24 – 12:55
9 th : 1:00 – 1:50 1:45-Announcements if needed	9 th : 1:00 – 1:50 1:45-Announcements if needed	9 th : 1:00 – 1:50 1:45-Announcements if needed
10 th : 1:55 – 2:45	10 th : 1:55 – 2:45	10 th : 1:55 – 2:45

Option B: Half-hour Push

High School Bell Schedule

Option C :

Flip H.S. and M.S. and maintain current 3 tier bussing

With this option, middle schools would have the earliest start time, followed by the high school and elementary schools.

Option C			
Level	Start Time	End Time	Length of Day
Middle Schools	7:25 AM	2:35 PM	7 hr
High School	8:15 AM	3:15 PM	7 hr
Early Elem	9:05 AM	3:50 PM	6 hr, 45 min
Late Elem	9:20 AM	4:05 PM	6 hr, 45 min

Option C :

Flip H.S. and M.S. and maintain current 3 tier bussing

This option is currently being routed in real-time

Average ride time for all students:

- 20 minutes in the AM
- 19 minutes in the PM

Minimal conflicts in this schedule

94 vehicles would be used

Option should not require any additional vehicles/drivers (TBD based on final routing)

	Earliest Pick-up	Latest Drop-off	Shortest Route		Longest Route	
			AM	PM	AM	PM
Elementary	8:09 AM	5:06 PM	5 minutes	5 minutes	61 minutes	65 minutes
Middle School	6:23 AM	3:40 PM	12 minutes	9 minutes	65 minutes	65 minutes
High School	7:04 AM	4:18 PM	9 minutes	10 minutes	59 minutes	59 minutes

REGULAR DAY		
4 th PERIOD Lunch	6 TH PERIOD Lunch	8 TH PERIOD Lunch
1 st : 8:15 – 9:12 8:15 Pledge 9:07 Ramble or announcements AM Tech departs at 8:15	1 st : 8:15 – 9:12 8:15 Pledge 9:07 Ramble or announcements AM Tech departs at 8:15	1 st : 8:15 – 9:12 8:15 Pledge 9:07 Ramble or announcements AM Tech departs at 8:15
2 nd : 9:17 – 10:07	2 nd : 9:17 – 10:07	2 nd : 9:17 – 10:07
3 rd : 10:12 – 11:02	3 rd : 10:12 – 11:02 PM Tech departs at 10:58	3 rd : 10:12 – 11:02 PM Tech departs at 10:58
4 th Lunch: 11:02 – 11:33	4/5: 11:07 – 11:58	4/5: 11:07 – 11:58
5/6: 11:38 – 12:29	6 th Lunch: 11:58 – 12:29	6/7: 12:03 – 12:54
7/8: 12:34 – 1:25	7/8: 12:34 – 1:25	8 th Lunch: 12:54 – 1:25
9 th : 1:30 – 2:20 2:15-Announcements if needed	9 th : 1:30 – 2:20 2:15-Announcements if needed	9 th : 1:30 – 2:20 1:15-Announcements if needed
10 th : 2:25 – 3:15	10 th : 2:25 – 3:15	10 th : 2:25 – 3:15

Option C :
Flip H.S. and M.S. and maintain current 3 tier bussing

Option D: Late Adjusted N.M.S. and H.S. transported together (2 tier transportation platform)

This option has middle school and high school starting at the same time followed by the elementary schools. North MS and PHS students would be transported together.

Option D			
Level	Start Time	End Time	Length of Day
HS/MS	8:00 AM	3:00 PM	7 hours
ES (Guth/Sellersville)	8:45 AM	3:30 PM	6 hrs, 45 min
ES (other buildings)	8:50 AM	3:45 PM	6 hrs, 55 min

Option D :

Late Adjusted N.M.S. and
H.S. transported
together (2 tier
transportation platform)

This option is currently being routed in
real-time

Minimal conflicts in this schedule

Possible need for 2 additional
vehicles/drivers

Non-pub schools have an immediate
impact on the longest routes due
arrival and dismissal times

	Earliest Pick-up	Latest Drop-off	Shortest Route		Longest Route	
			AM	PM	AM	PM
Elementary	8:12 AM	4:45 PM	10 minutes	8 minutes	52 minutes	51 minutes
Middle School	6:37 AM	4:23 PM	14 minutes	10 minutes	82 minutes	73 minutes
High School	6:41 AM	4:36 PM	6 minutes	10 minutes	78 minutes	86 minutes

REGULAR DAY		
4 th PERIOD Lunch	6 TH PERIOD Lunch	8 TH PERIOD Lunch
1 st : 8:00 – 8:57 8:00 Pledge 8:52 Ramble or announcements AM Tech departs at 8:00	1 st : 8:00 – 8:57 8:00 Pledge 8:52 Ramble or announcements AM Tech departs at 8:00	1 st : 8:00 – 8:57 8:00 Pledge 8:52 Ramble or announcements AM Tech departs at 8:00
2 nd : 9:02 – 9:52	2 nd : 9:02 – 9:52	2 nd : 9:02 – 9:52
3 rd : 9:57 – 10:47	3 rd : 9:57 – 10:47	3 rd : 9:57 – 10:47
4 th Lunch: 10:47 – 11:18	4/5: 10:52 – 11:43	4/5: 10:52 – 11:43
5/6: 11:23 – 12:14	6 th Lunch: 11:43 – 12:14	6/7: 11:48 – 12:39
7/8: 12:19 – 1:10	7/8: 12:19 – 1:10	8 th Lunch: 12:39 – 1:10
9 th : 1:15 – 2:05 2:00-Announcements if needed	9 th : 1:15 – 2:05 2:00-Announcements if needed	9 th : 1:15 – 2:05 2:00-Announcements if needed
10 th : 2:10 – 3:00	10 th : 2:10 – 3:00	10 th : 2:10 – 3:00

Option D:

Late Adjusted N.M.S. and H.S. transported together (2 tier transportation platform)

Impact on Athletics

Basic facts:

- Turf Field usage occurs from 2:30 to 9:00 p.m. on a daily basis
- Fall and spring being outdoor require lights
- Competitions that occur on the turf/track:
 - Football, Field Hockey, G/B Soccer (4 evening events under the lights), G/B Soccer Varsity game on the turf, Track and Field, G/B Lacrosse (play all evening games under the lights due to T/F daily practices), JV Football, North M.S. Football games on turf, 3 Middle Schools track meets at stadium

Little impact on winter sports

If a later start time, morning practices can also occur later

Impact on Athletics

Current H.S. start

- Students are dismissed at 2:15 PM
- Students arrive to practices by 2:30 PM
- Students home competitions begin at 3:30 PM
- Away competitions are dismissed as early as 1:30 PM (earlier for further away competitions or later for closer)
- Students are missing approximately 45 minutes of class time (1 period, but allows them to check in at the beginning of that class)

Impact on Athletics

7:45 AM H.S. start

- Students are dismissed at 2:45 PM
- Students will arrive to practices by 3:00 PM
- Students home competitions will still begin at 3:30 PM
- Students away competitions are dismissed as early as 1:30 PM (earlier for further away competitions or later for closer)
- Students are missing approximately 75 minutes of class time (1 and one-half periods)

Impact on Athletics

8:00 AM H.S. start

- Students are dismissed at 3:00 PM
- Students will arrive to practice by 3:15 PM
- Students home competitions would begin at 3:45 PM (in order to allow for one-half hour warm-ups)
- Students away competitions are dismissed as early as 1:30 PM (earlier for further away competitions or later for closer)
- Students are missing approximately 90 minutes of class time (2 periods)

Impact on Athletics

8:15 AM H.S. start

- Students are dismissed at 3:15 PM
- Students will arrive to practice by 3:30 PM
- Students home competitions would begin at 4:00 PM (in order to allow for one half hour of warm-ups) or they would be dismissed 15 minutes early from school to maintain a 3:45 PM start
- Students away competitions are dismissed as early as 1:30 PM (earlier for further away competitions or later for closer)
- Students are missing approximately 105 minutes of class time (2 periods)

Impact on Upper Bucks County Technical School (UBCTS)

7:15 a.m. H.S. start

- As of October 1, UBCTS Enrollment 167 AM/ 167 PM
- AM Students * Attend 1st period class.

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
8:12 AM	8:22 AM	11:20 AM	11:30 AM	2:58 Hours

- PM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
10:58 AM	11:08 AM	2:05 PM	2:15 PM	2:57 Hours

Impact on Upper Bucks County Technical School (UBCTS)

7:45 a.m. H.S. start

- AM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
7:45 AM	7:55 AM	10:47 AM	10:57 AM	2:47 Hours

- PM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
10:37 AM	10:47 AM	1:40 PM	1:50 PM	2:53 Hours

Impact on Upper Bucks County Technical School (UBCTS)

Students arriving at the Tech School by 8:15 will allow the instructors to begin teaching earlier than they currently do.

8:00 a.m. H.S. start

- AM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
8:00 AM	8:10 AM	11:07 AM	11:17 AM	2:52 Hours

- PM Students

Leave PHS	Arrive at TECH	Leave TECH	Arrive at PHS	Time at TECH
10:52 AM	11:02 AM	1:55 PM	2:05 PM	2:53 Hours

Impact on Upper Bucks County Technical School (UBCTS)

8:15 a.m. H.S. start

- AM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
8:15 AM	8:25 AM	11:24 AM	11:34 AM	2:59 Hours

- PM Students

Leave PHS	Arrive at UBCTS	Leave UBCTS	Arrive at PHS	Time at UBCTS
11:07 AM	11:17 AM	2:10 PM	2:20 PM	2:53 Hours



What's
Next?

Next Steps...

December

- Repeat student sleep habit survey
- Student, Staff and Community Forums

January or February

- Final recommendation presented to the Pennridge School Board

Ongoing

- Continue exploration of transportation models presented
- Refine options based on findings
- Sleep and School Start meetings/communications continue while refining options



No Decisions Have
Been Made!

Thank You! & Questions?