

## Testimony in Support of LD386: Late Start Times for High School

Good morning, President Daughtry, members of the committee, and distinguished guests. My name is Martha Jacques, Principal of Biddeford High School, and I am here today to express my support for LD386, which proposes a later start time for high schools in Maine. I am speaking in favor of this bill because of the significant, positive impact that later start times have had in the Biddeford School District, where we implemented this change in 2018.

The decision to shift our high school start time later was not made lightly. After careful consideration, including reviewing scientific research, engaging with our community, and gathering input from educators, parents, and students, Biddeford made the move to start school at 8:30 a.m. The results have been overwhelmingly positive, not only for our students' academic performance but also for their health, well-being, and overall quality of life.

Here are the key findings from our experience that demonstrate why later start times are essential for the success of our students:

1. Improved Academic Performance Research consistently shows that adolescents need more sleep, and by starting school later, students are more alert and ready to learn. In Biddeford, we saw an increase in student engagement and classroom participation. Students are more focused, and their ability to retain and apply knowledge has been significantly enhanced.

2. Enhanced Mental Health and Reduced Stress Prior to the implementation of later start times, students were often sleep-deprived, leading to heightened levels of stress, anxiety, and depression. With the later start time, students have more time to rest, improving their emotional regulation and overall mental health. The extra sleep has given students the energy and resilience to better manage the demands of their academic and personal lives. As a parent of a high school student who plays sports and participates in other extra curricular activities, my son often does not get home until after 9pm, has to do homework and have some downtime and is not

able to go to sleep until after 11 pm. The later start time affords him an extra hour of sleep which he would not have been able to access prior to this change.

3. Positive Impact on Attendance Another benefit we've seen in Biddeford is a marked improvement in attendance rates. Students are now more likely to arrive at school on time, which means fewer missed instructional hours. The combination of improved sleep and a better start to their day has had a direct impact on their ability to be present and engaged in their education.

4. Improved Relationships with Family and Community. With later start times, students have a more balanced routine, which translates into better relationships with their families. Parents have reported that their children are more awake and positive in the mornings, and there is less tension surrounding school mornings. Additionally, students have more time to engage in after-school activities, sports, and community events, promoting a well-rounded life.

5. Supported by Research and Science The decision to adopt later start times in Biddeford was heavily influenced by the scientific evidence showing that adolescents have different sleep needs than adults. The American Academy of Pediatrics and other leading health organizations recommend that high schools start no earlier than 8:30 a.m. to align with adolescents' natural sleep patterns and circadian rhythms. This change not only supports our students' physical and mental health, but it also aligns with the latest findings in educational research.

In conclusion, the shift to later start times has been a resounding success for Biddeford High School, and I firmly believe that the adoption of similar policies across the state of Maine through LD386 would be a positive step forward for all students. The evidence is clear: later start times promote better sleep, improve academic outcomes, and support the overall well-being of our students. I strongly urge this committee to support LD386 to ensure that all high school students in Maine have the opportunity to succeed, thrive, and be their best selves.

Thank you for your time and consideration and I've included the information and FAQ documents that we had shared with our parents and communities prior to making our decision.

Warmly,  
Martha Jacques  
Principal, Biddeford High School  
Biddeford, Maine

## Informational Letter About Later Start Times in Biddeford

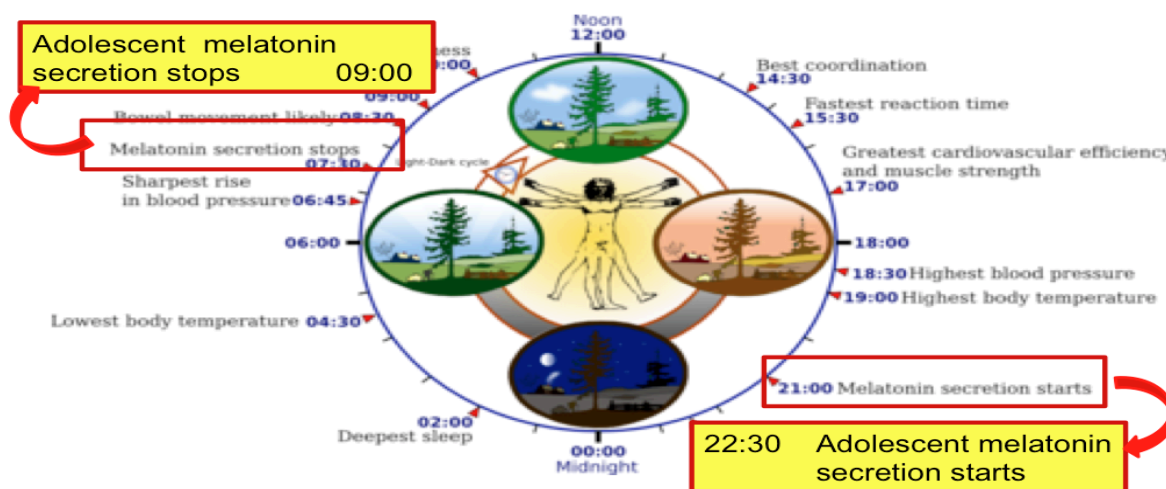
This informational letter is to inform parents/guardians, the community, and staff about important details of the proposed school calendar that will be voted on **April 6th, 6:30 pm** at the Pepperell Mill Conference Room (located next to Portland Pie Company).

The Biddeford School Department started the process of examining school start times early in October, when an unprecedented fourteen school departments convened to study the matter. Since that time, we have hosted a community presentation on November 18, a four-community joint board workshop on February 2, and a parent meeting on February 23. In the event that community members could not attend, we also sent a child care survey to all K-8 parents, to which hundreds responded. Additionally, we had a group of high school students discuss the issue, meeting with a local sports physician and with students from Westbrook High School who currently have later start and end times. The proposed start times for the 2016-2017 school year are later for Biddeford Middle School, Biddeford High School, and the Biddeford Regional Center of Technology. This change is informed by unimpeachable science, including guidelines published by the venerable American Academy of Pediatrics and Centers for Disease Control and Prevention. Both medical organizations support school policies that no middle or high school start before 8:30 AM. Start time for elementary schools will slide forward 10 minutes (similar to the start times from two years ago).

Adolescents require (a minimum) 8.5 to 9.5 hours of sleep per night for optimum health, and early school start times prevent teens from obtaining sufficient sleep. According to a national survey by the Centers for Disease Control & Prevention, Biddeford's current start times for middle school and high students are some of the earliest in Southern Maine. Biddeford Middle School students begin their day with a bus drop off time of 7:10. Many of our students are on a bus by 6:30am each morning.

As most parents know empirically, during puberty adolescents

# Human Biological Clock: Adult vs. Adolescent



(Carskadon et al., 1979; National Sleep Foundation, 2009; Wahlstrom, 2003)

During adolescence we grow faster and undergo more biological and physiological transformation than at any other time in our lives, second only to human growth from birth to age two. Sleep is when we do the majority of our tissue and muscle repair. Teens process experiences into memories, and essentially recharge their hard drives during healthy sleep. Sleeping in on weekends only serves to create a 'jet lag' effect.

The proposed schedule for the 2016-2017 school year meets the recommendation given by **The American Academy of Pediatrics, the Centers for Disease Control, the National Association of School Nurses, and the Society of Pediatric Nurses to start school no earlier than 8:30 for middle school and high school students.** In to accomplish our goal to better serve our students, the Biddeford School Department is recommending the following start times for all schools:

Biddeford School Department ***DRAFT***											
School	Bus Drop	Current Start	Current End	Bus Pick Up		Proposed Bus Drop	Proposed Start	Proposed End	Bus Pick-Up	Current Staff Hours	New Staff Hours
JFK	8:10	8:20	2:55	2:55		7:40	7:50	2:20	2:20	8:10-3:10	7:35-2:35
BPS	7:55	8:10	2:45	2:45		7:45	7:50	2:25	2:20	8:00 - 3:00	7:40-2:40
BIS	7:55	8:15	2:45	2:45		7:45	7:50	2:25	2:25	8:00 - 3:00	7:40-2:40
BMS	7:10	7:30	2:00	2:00		8:20	8:40	3:10	3:10	7:10-2:10	8:10-3:10 / 8:20-3:20
BHS	7:15	7:45	2:00	2:00		8:25	8:35	2:45	3:00	7:35-2:35	8:00-3:00
COT		7:45	1:45 (TA, OOB,KHS) 1:55 BHS				8:35	2:45		7:35-2:35	8:00-3:00

## **Frequently Asked Questions**

### **1. Who supports later school start times for adolescents?**

Answer: Locally, dozens of pediatric and family medicine doctors in Southern Maine have signed on in support of later start times, including Dr. Victoria Rogers, MD head of *Let's Go! 5-2-1-0*, and our school physicians of record who advise our school district on all health policy. Nationally, myriad professional groups have endorsed healthy school start times. Below are just a few entities who have spoken clearly on the scientifically-based recommendations for later start times:

*The Education Commission of the States*  
*The American Academy of Pediatrics*  
*The National Association of School Nurses*  
*The Society of Pediatric Nurses*  
*The American Academy of Child and Adolescent Psychiatry*  
*The Lloyd Society (Juvenile Justice Group)*

*The Centers for Disease Control*  
*The American Thoracic Society*  
*The American Thoracic Society*  
*U.S. Secretary of Education Arne Duncan*  
*The National Sleep Foundation*

### **2. What are the effects of not getting enough sleep?**

Answer: Chronic sleep deprivation is associated with a host of medical, mental health, safety, and behavioral issues. Below is a mere sampling of some of the research:

- *Increased disparity, wider achievement gap (Buckhalt, 2011; Jacob and Rockoff, 2011)*
- *Poorer academic performance, grade failure (Kahn et al, 1989; Wahlstrom, 2014)*
- *Poorer attention and problem solving (Gibson et al, 2006; Kilgore et al, 2007)*
- *Depression and anxiety (Bates, 2002; Chorney et al, 2008; Gibson et al, 2006; Kahn, 2006)*
- *Suicide (Bernert and Joiner, 2007)*
- *Increased sports injuries (Milewski et al, 2012)*
- *Increased risk-taking: violence, drug use, sexual activities, unsafe behaviors (O'Brien, 2005)*
- *Obesity (Mitchell et al, 2013; Must and Parisi, 2009; Taheri et al, 2004)*
- *Poorer dietary choices (Hale, 2013)*
- *Increased automobile accidents (Danner and Phillips, 2008; NCSDR, 1997; Wahlstrom, 2014)*

### **3. What are the benefits of a later start time for Biddeford middle and high school students?**

Answer: Based on National and Regional data from other school departments that have made the change:

- *Failing grades down 50% in one year (Nauset Regional High School, Eastham, MA)*
- *Absenteeism went down 40% in one year (Nauset Regional High School, Eastham, MA)*
- *Tardiness decreased 35% in one year (Nauset Regional High School, Eastham, MA)*
- *Sports related injuries are 68% less likely for students who are not sleep deprived (National Data)*
- *Teen automotive accidents/fatalities among teens have decreased by 60-70% in many communities with later high school starting bells (National Data)*

#### 4. Why are different start times for elementary and middle/high schools proposed?

Answer: During puberty two phenomena occur which shift the adolescent sleep and wake times later than younger children and adults: melatonin is secreted later in the evening, and the sleep drive is extended. These temporary changes are the reason adolescents biologically cannot adapt well to early wake times, which results in chronic sleep loss and related health and safety concerns. Research consistently points to 8:30 am as the earliest that school should start.

Elementary-aged children are biologically programmed to be awake and alert earlier than teens, and thus some schools familiar with the research choose to start the elementary day earlier. The new start times for elementary schools will be similar to the times from just two years ago. In order to make the transportation system work between high school/middle school and the elementary schools, 40 minutes between start times is needed.

#### 5. What time does my child need to go to bed to meet the recommended amount of sleep?

Answer: (source: National Sleep Foundation)

Age	Wake-up time											
	4:45 AM	5:00 AM	5:15 AM	5:30 AM	5:45 AM	6:00 AM	6:15 AM	6:30 AM	6:45 AM	7:00 AM	7:15 AM	7:30 AM
	Sleeping Time											
5	5:30 PM	5:45 PM	6:00 PM	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:30 PM	8:00 PM	8:15 PM
6	5:45 PM	6:00 PM	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:30 PM	8:00 PM	8:15 PM	8:30 PM
7	6:00 PM	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	7:15 PM	7:30 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM
8	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:30 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM
9	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	7:30 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM
10	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM
11	7:00 PM	7:15 PM	7:30 PM	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM
12	7:00 PM	7:15 PM	7:30 PM	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM
13	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM
14	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM
15	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM
16	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM
17	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM
18	7:45 PM	8:00 PM	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 PM	10:00 PM	10:15 PM	10:30 PM

#### 6. Won't later start times interfere in extracurricular activities and homework?

Answer: Later morning start times have the potential to reduce sports injuries and reduce the amount of time spent on homework – thus protecting student-athletes and providing additional opportunities for community and

extracurricular involvement. Among schools around the country who have adopted later start times, extracurricular activity participation remains largely unchanged and Athletics Directors report that the logistics work out better than anticipated.

Research conducted by Stanford University in 2012 showed a 68% increase in sports injuries among adolescents who obtained less than 8 hours of sleep compared to their peers who obtain more than 8 hours per night. These results are not surprising considering that chronic sleep deprivation is associated with decreased reaction time, decreased attention, and poorer peripheral vision. Students who obtain more sleep spend less time on homework, which is also not surprising considering the cognitive effects of sleep deprivation.

The Biddeford School Department determined that after school athletics would be negligibly impacted. The athletic department modeled projections for sample 2016-2017 schedules based on this year's schedule and determined that students may rarely need to be released early from class during the fall and spring seasons, as a result of available daylight. By working together regionally to create schedules, we expect minimal issues. Current MSMA schools such as Westbrook dismiss students at 2:30-2:40 and their students report no issues with athletic events and homework demands.

### **7. Won't teens just stay up later if school starts later?**

Answers: Based on research and case studies, the answer is a resounding no! Given the later shift in circadian rhythms that occurs during puberty, a teen's bedtime is dictated by biology whereas his/her wake time is dictated by the alarm clock. Studies show that students in neighboring school departments with different start times report that they fall asleep at approximately the same times each night.

Adolescent sleep deprivation is driven in large part by early wake times. In myriad studies of adolescents in schools where later school start times were enacted, adolescent bedtimes remained largely unchanged and total sleep time increased in relation to the later start to the school day.

### **8. Isn't it the parents' responsibility to make sure kids get enough sleep? Don't we need to prepare teens for the real world? Isn't this coddling teens? "I got up early and I was ok!"**

Answers: Parents and teens are responsible for healthy bedtimes, and schools are responsible for healthy wake times. The changes in sleep that occur during puberty are temporary, and end in the mid-twenties. In fact many colleges and the **Air Force Academy** are altering their schedules, **including Duke University** which banned courses before 8:30am due to the research. Once puberty is complete the young adult is better able to rise early in the morning, if needed. Even though adults seem to rise earlier, major cities report median work start times after 8:00 am.

- New York - 8:24 am
- San Francisco - 8:17 am
- Ann Arbor, Mich - 8:15 am
- Miami - 8:14 am
- Boston - 8:11 am
- Washington, DC - 8:07 am
- United States - 7:55 am

School department officials have heard some variation of "early start times didn't hurt me" on more than one occasion. We have all chuckled about things we used to do as children including riding in the back of pickup trucks, eating red meat and drinking whole milk seven days a week for 'good health,' and so on. This rebuttal is the stuff of

a Facebook meme. Just because we did it and lived to tell the story doesn't mean we should have, or couldn't have been better positioned for academic success or physical safety.

**9. As a parent of a middle school or high school student I need to be at work early. I typically drop my child off at school and now need child care. The new schedule creates a problem for my family, doesn't it?**

Answer: The school department understands that the schedule will create problems for some students and families. We intend to have a staff member available at BHS starting at 7:00 am in the library and a staff member available at BMS starting at 7:10 am.

**10. Aftercare costs in the City of Biddeford are costly. Won't a later start time impact my family's child care expenses?**

Answer: The school department conducted a survey on aftercare needs and costs. We recognized that a percentage of people will have a new aftercare expense, while a majority of people responded that child care needs will remain the same. In an effort to assist families, the school department is working with the YMCA and the Biddeford Recreation Department to offer more cost effective programs for families in response to the change in schedule. The cost of each program is as follows:

Biddeford Before and After Cub Care (Grades K-5) - DRAFT Location: BIS				
Programs	Time	Daily	Weekly	Monthly
Morning Care 1 Hour	6:50-7:50	\$5.00	\$25.00	
PM 1 Hour Care	2:30-3:30	\$5.00	\$25.00	
Additional Child		\$4.00	\$20.00	
PM 1 Hour Care Family Cap			\$50.00	
Programs	Time	Daily	Weekly	Monthly
PM Care 3 Hours	2:30-5:30			
PM (2 Day Option)	2:30-5:30	\$13.75	\$27.50	\$110.00
PM (3 Day Option)	2:30-5:30	\$11.66	\$35.00	\$140.00
PM (4 Day Option)	2:30-5:30	\$10.63	\$42.50	\$170.00
PM (5 Day Option)	2:30-5:30	\$10.00	\$50.00	\$200.00
Additional Child				
PM Care 3 Hours	2:30-5:30			
PM (2 Day Option)	2:30-5:30	\$11.88	\$23.75	\$95.00
PM (3 Day Option)	2:30-5:30	\$10.42	\$31.25	\$125.00
PM (4 Day Option)	2:30-5:30	\$9.69	\$38.75	\$155.00
PM (5 Day Option)	2:30-5:30	\$9.25	\$46.25	\$185.00
Programs	Time	Daily	Weekly	Monthly
Early Release	12:30-5:30	\$25.00		
Contact Biddeford Recreation Department for More Details: 283-0841				



YMCA Child Care Program								
Location: Biddeford Primary School								
	Morning Care		PM Care - 1 hour		Full PM Care		Full PM Care	
	6:30 - 7:50 am		2:30 - 3:30 pm		2:30 - 6:00 pm		2:30 - 3:30 pm	
	5 Days		5 Days		5 Days		3 Days	
Household Income	Monthly	Weekly	Monthly	Weekly	Monthly	Weekly	Monthly	Weekly
\$0 - \$25,000	\$61.00	15.25	\$25.00	6.25	\$100.00	25.00	\$72.00	18.00
\$25,000 - \$50,000	\$122.00	30.50	\$50.00	12.50	\$200.00	50.00	\$144.00	36.00
\$50,000 - \$75,000	\$183.00	45.75	\$75.00	18.75	\$300.00	75.00	\$216.00	54.00
\$75,000 and above	\$244.00	61.00	\$100.00	25.00	\$400.00	100.00	\$288.00	72.00
Note: 3 Day morning care program and Morning/PM combo also offered. Check with the Y for fee details. Included in the YMCA Program: 1. State Licensed 2. Swim Lessons for full PM Care children 3. YMCA Youth Membership 4. Early Release days included in fee for full PM Care children For More details please contact the YMCA: 283-3778								

### 11. I rely on my middle school child to care for younger siblings after school. What now?

Answers: As long as the school day is shorter than the workday, parents will always need to make accommodations to provide the best care options for children. Our primary goal is that no child will be boarding a bus before 7 am.

We also have to weigh the health and safety risks of not addressing healthier start times. Research shows that later start times also help reduce the amount of unsupervised time after school where young teens are known to be at higher risk for experimenting with substances.

### 12. How much does electronic screen time impact adolescent sleep?

Answers: The biggest barrier to teen sleep is a lack of awareness and understanding of the biological shift in teen sleep cycles during puberty. The sleep shift is a real, but temporary phenomena.

The first studies on teen sleep date back 25 years or more, well before personal electronic devices were as pervasive in our culture. Excessive use of digital devices before bed can have an impact on both teen and adult sleep. The pediatric and family medicine doctors supporting later start times in our region also recommend that parents model and enforce good sleep hygiene when it comes to technology. This includes creating consistent bedtime routines, removing personal electronics from the bedroom, and installing a family docking station in the house where these devices go at night.

Just as we educate children about the harmful impact of tobacco and drugs and encourage the use of safety belts and avoiding strangers on- and off-line, we need to teach our children about the importance of good sleep hygiene while also being more aware of the very real sleep phase delay in puberty.

### 13. Are other communities looking to change their school start times?

Answer: Yes, and here are some activities to date: Cumberland, Westbrook, Topsham and Brunswick have already changed their school start times. South Portland, Scarborough, Saco/TA, Old Orchard Beach, Yarmouth and Freeport are now considering later start times for the coming year

**14. What will the new bus routes look like for next school year if the start times change?**

Answer: A draft bus route schedule can be viewed on the school department website, [www.biddefordschooldepartment.org](http://www.biddefordschooldepartment.org)

**15. Why is a regional approach critical for change?**

Answers: From "FAQs About Late Start" - Local school districts are organized in ways that limit the ability of local school boards to modify their own schedules independent of regional change. For example, communities that send students to Regional Centers of Technology (e.g., Biddeford, Sanford, or Westbrook vocational schools) are legally required to conform to a regional school calendar schedule. While isolated change has occurred, school districts who want to act independently on the research and delay start (and possibly end) times can create logistical problems related to transportation and extracurricular scheduling.

**16. Where can I locate more information about school start times and the research behind the reason for a change.**

Answer: You can locate the presentation given on November 18, 2015 on our website under the school start later links. In addition, Start School Later on Facebook has many articles and other information about the research done on healthy start times.