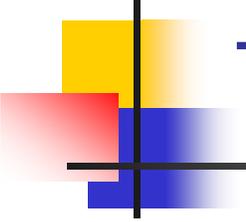


Proposal for Change in Start Times: 2011-2012

Bedford School Committee

January 4, 2011

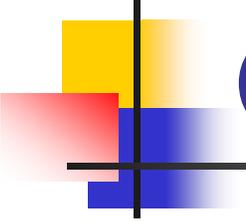
Dr. Maureen LaCroix, Superintendent



Proposed Change in Start Times for 2011-2012

Agenda

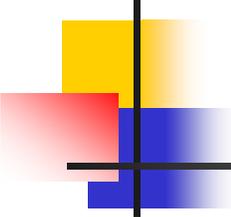
1. Review 2005 Late Start Committee Findings and Summary of Jesse Dickinson Meltz Research Findings
2. Proposed Schedule for 2011-2012
3. Change in 2005 Assumptions: A Move to Bus Consolidation (JGMS & BHS)
4. Consideration for Teacher Professional Development Time: Weekly (Wednesday) Early Release
5. Discussion



Bedford 2005 Late Start Committee Findings

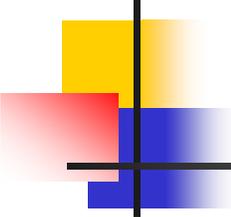
The group unanimously concluded that future efforts to establish a later start time for BHS and JGMS should be initiated at a time when the fiscal climate for the town improves. A summary of study group research shows that:

- There is evidence that the amount of sleep, time of day, and circadian rhythms do play a part in how prepared an adolescent is to learn.
- Teenagers need more sleep than they did as preadolescents.
- Because of the change in their circadian rhythms, teenagers cannot simply go to bed earlier.



Bedford 2005 Late Start Committee Findings (continued)

- Loss of REM sleep results in memory loss
- Loss of REM Sleep reduces concentration, reduces creativity.
- During competition, sleep loss reduces an athlete's ability to reason logically, maintain visual and auditory vigilance, and make decision effectively.
- Students with sleep lag syndrome have poorer grades than their peers.
- Insufficient sleep is highly associated with poor conduct and aggressive behaviors and can create symptoms similar to those of ADHD.

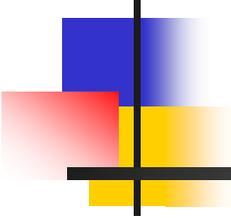


Recommendation from the 2005 Later Start Time Committee

Assumption from 2005: Continue 4 Bus Routes

- Because the projected increase in transportation costs for the new scenario are approximately 40% higher than current costs, the Later Start Committee concluded that the new scenario is not viable at this time. The study group recognized that increased costs of this magnitude would likely result in corresponding reductions to established education programs and/or class size practices in order to fund the initiative in the context of fiscal realities projected for the Town of Bedford during the next several years.

2010 Research on Change in Start Time

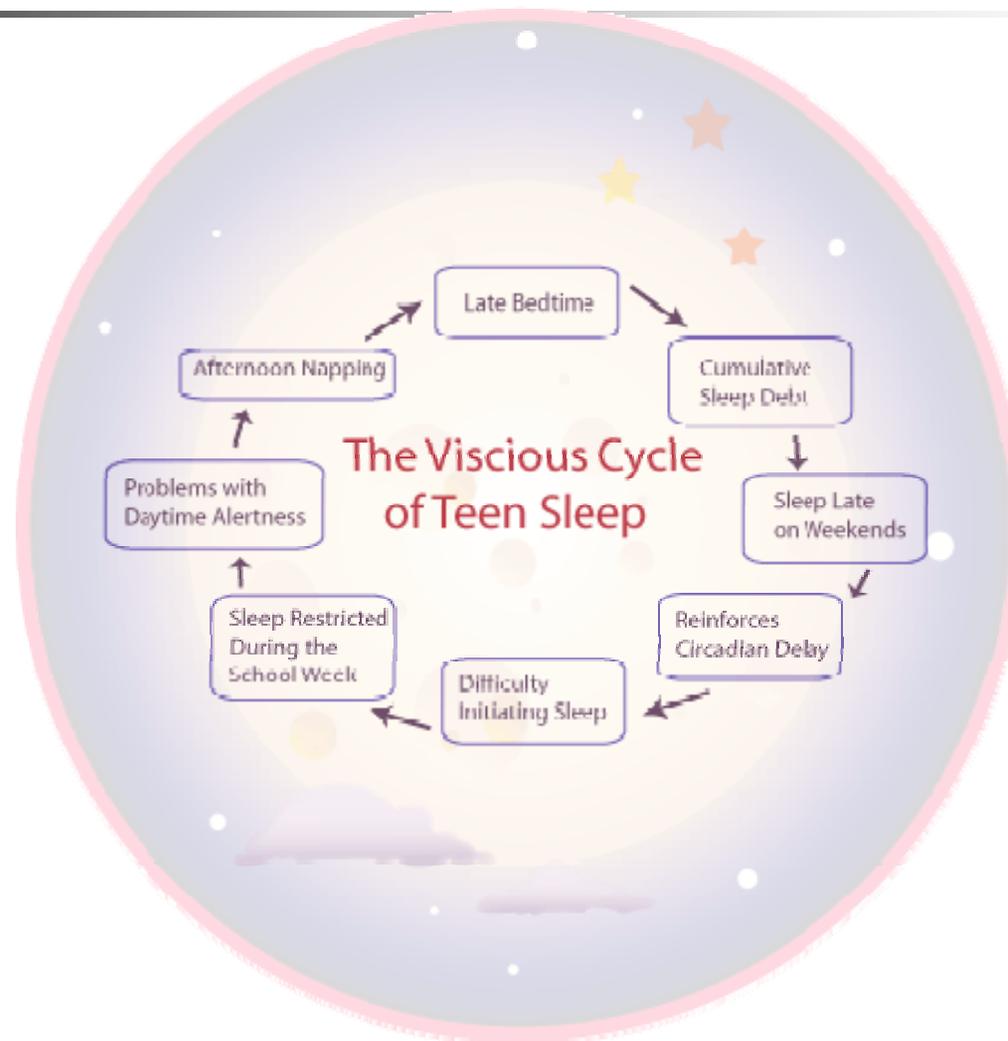


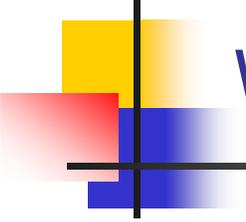
Jesse Dickinson Meltz

Researcher

(Class of 2012, Bedford High School)

Where to Begin? Jesse Dickinson-Meltz (Class of 2012): Bedford High School Researcher

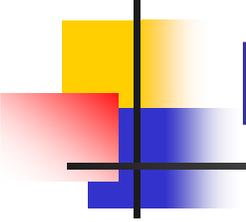




Why Don't Teens Just Go to Bed?

1. Part of the maturation process in teenagers involves a shift in the Circadian Rhythm
2. Melatonin released in teens between 11pm and 8am.
3. Difficult for a teens to fall asleep before 11pm.
4. Against biological reality for teens to be awake before 8am.

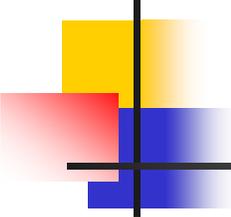
***Jesse Dickinson Meltz



Loss of Sleep is Detrimental to Learning

- Dr. Avi Sadeh of Tel Aviv University - a small loss of sleep results in a major loss of achievement, "A loss of one hour of sleep is equivalent to [the loss of] two years of cognitive maturation and development."
- Dr. Paul Suratt of the University of Virginia - every hour of weekend sleep shift costs a child 7 IQ points. "Sleep disorders can impair a child's IQ as much as lead exposure."
- Mary Carskadon of Brown University - teens receiving A's averaged about fifteen more minutes than B students, who averaged about fifteen more minutes than C students, and so on. Every fifteen minutes count.

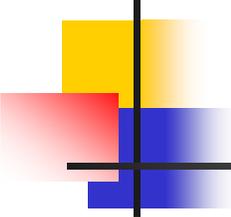
***Jesse Dickinson Meltz



Massachusetts High Schools with Changes to Later Start Times

- Hingham: 7:20 to 8:00
- Lynnfield: 7:30 to 8:00
- Shrewsbury: 7:50 to 8:00
- Holyoke: 7:15 to 8:15
- Duxbury: 7:25 to 8:20

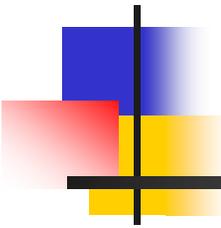
...Jesse Dickinson Meltz



Comments from Hingham High School

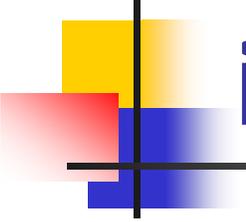
- *I continue to believe that the new schedule is a real plus for everyone. I wouldn't change it. The A period classes are as awake as the B period classes so I don't think the tired student A period is a reality. I also feel that the teachers and the students have benefited from the rotating periods and dropping one class. The stats really seem to show that this change is very successful. I also think that the stats point out how valuable our school climate program is. (English Teacher, Grades 10, 12)*
- *"Our new time and schedule were well received and have positively benefited education here at Hingham High. Among other indicators of our success is the fact that we were recognized as a Blue Ribbon School by the US Department of Education this year!" (Principal of HHS Paula McCann)*

...Jesse Dickinson Meltz



Proposed Schedule Change

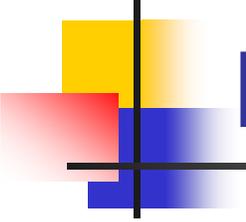
2011-2012
School Year



Critical Change in Assumptions in 2010

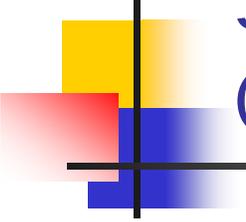
Make the proposal cost neutral by reducing current Bus Routes from 4 to 3. This change requires/results in the following:

- Combine JGMS and BHS students on the same buses.
- Realize modest budget savings with consolidation.
- Eliminate the problem of underutilized space on high school routes.



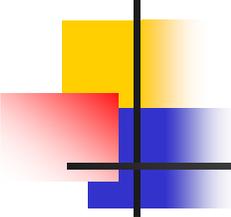
School Districts with Combined Middle and High School Buses

- Deerfield
- Dracut
- East Bridgewater
- Franklin
- Harvard
- Lunenburg
- Maynard
- Middlesex-Essex RSD
- Millis
- Norwell
- Pembroke
- Rockland
- Saugus
- Spencer-East Brookfield RSD
- Stoughton
- Wareham
- Wayland
- Westborough
- Weston
- Winchester



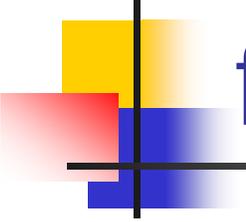
Selective Superintendent Comments on Combined Middle/High School Buses

- **District #1:** We have been doing this for at least 30 years with no complaints. The longest any student is on a bus is 55 minutes, and that's because we cut three routes over the past two years. Our problem is that we are a spread out rural district. Some buses come in half full, but we can't put any more kids on them because of time constraints.
- **District #2:** We have done this combination for years. MS and HS students separate themselves.
- **District #3:** We have transported MS (grades 6-8) and HS students together for years. Before we built the new primary school in 2003, fifth grade was at the middle school. While parents worry generally, there are very few concerns between MS and HS students—literally a handful every year. Some of our students are on the bus 50 minutes.



Selective Superintendent Comments on Combined Middle/High School Buses

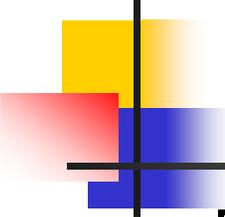
- **District #4:** We have MS (Grades 5-8) and HS (Grades 9-12) students riding the same buses and school starts at 8:00. It works very well.. Years ago, when the grade 5 students moved into the MS building (which is upstairs over the HS and shares cafeteria, library, and gym) and thus were on the same bus runs, parents were a bit concerned but no problems or concerns at all now. Many HS students drive anyway and the bus drivers are great. They really get to know the kids. We are fortunate, being a small town, that none of our bus runs are more than 20-25 minutes
- **District #5:** We have MS and HS students on the same buses. Parents were concerned that the big kids would corrupt the little kids, but in fact the big kids ignored them. Some of the kids were on the buses for 30 minutes. It really worked out with very few problems.



Making a Time Change Work for Professional Development

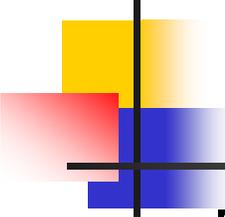
Create Teacher Collaboration Time

- The demands on faculty for collaborative planning, professional development and data analysis grow each year.
- A change in the student schedule provides the opportunity to change the use of time for teachers.
 - Proposal includes a move from 2 Early Release Days each month to an Early Release Day every Wednesday.



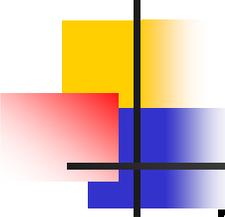
Bedford High School

Current Schedule <ul style="list-style-type: none">■ Start: 7:20 a.m.■ End: 2:01 p.m.	Proposed Schedule <p>Start: 7:50 a.m.</p> <p>End: 2:39</p>
Early Release (2 Wed.) <ul style="list-style-type: none">■ Start: 7:20 a.m.■ End: 11:35 p.m.	Every Wednesday <p>Start: 7:50 a.m.</p> <p>End: 1:10 p.m.</p>



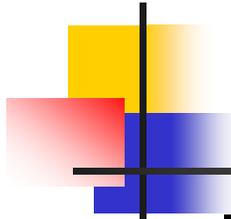
John Glenn Middle School

Current Schedule <ul style="list-style-type: none">■ Start: 7:50 a.m.■ End: 2:20 p.m.	Proposed Schedule <p>Start: 7:45 a.m.</p> <p>End: 2:24 p.m.</p>
Early Release (2 Wed.) <ul style="list-style-type: none">■ Start: 7:50 a.m.■ End: 11:15 p.m.	Every Wednesday <p>Start: 7:45 a.m.</p> <p>End: 1:00 p.m.</p>



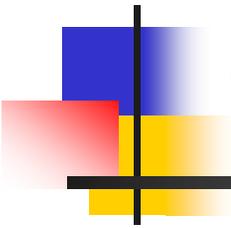
Lane School

Current Schedule <ul style="list-style-type: none">■ Start: 8:39 a.m.■ End: 2:45 p.m.	Proposed Schedule <p>Start: 8:44 a.m.</p> <p>End: 3:05 p.m.</p>
Early Release (2 Wed.) <ul style="list-style-type: none">■ Start: 8:39 a.m.■ End: 12:00 p.m.	Every Wednesday <p>Start: 8:44 a.m.</p> <p>End: 1:30 p.m.</p>



Davis School

Current Schedule <ul style="list-style-type: none">■ Start: 9:05 a.m.■ End: 3:10 p.m.	Proposed Schedule <p>Start: 9:10 a.m.</p> <p>End: 3:30 p.m.</p>
Early Release (2 Wed.) <ul style="list-style-type: none">■ Start: 9:05 a.m.■ End: 12:20 p.m.	Every Wednesday <p>Start: 9:10 a.m.</p> <p>End: 2:00 p.m.</p>



2011-2012 Change in Start Times

Questions?