

Littleton Public Schools Open House – Proposed Changes to School Start Times

What is the proposal?

Research tells us a later school start time positively impacts alertness, mental health, wellness, and behavior in high school and middle school students, which means students are better prepared to learn. LPS is exploring options that would better meet the needs of teenagers.

Start and End Times – Scenarios

| Level | Current | | Option 1 | | Option 2 | |
|----------------|---------|------|----------|------|----------|------|
| | a.m. | p.m. | a.m. | p.m. | a.m. | p.m. |
| ES – Group 1 | 8:36 | 3:19 | 8:00 | 2:43 | 8:55 | 3:40 |
| ES – Group 2 | 9:06 | 3:49 | | | | |
| Centennial ES | 8:16 | 3:24 | 7:50 | 2:58 | 8:45 | 3:53 |
| Field ES | 8:40 | 3:53 | 7:50 | 3:03 | 8:40 | |
| MS | 7:55 | 2:50 | 8:54 | 3:50 | 8:05 | 3:00 |
| HS – Arapahoe | 7:20 | 2:21 | 8:30 | 3:31 | 8:05 | 3:06 |
| HS – Heritage | 7:20 | 2:23 | | | | |
| HS - Littleton | 7:20 | 2:20 | | | | |

How are parents and other stakeholders involved?

- ✓ Learn about the research behind the proposed changes and the benefits to teenagers.
- ✓ Understand the scenarios and effects on your family.
- ✓ Identify preferences among the scenarios.
- ✓ Share parent benefits and concerns.

Potential Additional Annual Operating Costs Options 1 and 2

6 additional buses already budgeted

Additional maintenance \$27,150

Additional fuel \$15,000

Additional labor (drivers + benefits) \$95,000

Total additional costs \$137,150

What if we start all levels at the same time?

Capital costs (79 additional buses) \$8,700,000

Operating costs (all inclusive) \$5,300,000

The increase in fleet size would require an additional location or an expansion of the current terminal site. Our current facilities and staff are unable to operate a fleet of this size.

What are impacts to extracurricular activities?

- ✓ Dusk in late fall (November/early December) ranges from 5:30 p.m. to 4:30 p.m. after Daylight Savings Time. Most outdoor fall sports have concluded their season prior to the end of Daylight Savings Time.
- ✓ Some sports and activities will be impacted by later end times; this can be mitigated by more efficient practices that start right after school.
- ✓ Activities that are not currently scheduled before school will not move to a before-school practice time.
- ✓ Indoor sports/activities not impacted by daylight.

Look for more information on the district's website!

<http://littletonpublicschools.net/district/long-range-planning-committee>



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Why make a change?

University of Minnesota – Teens and Sleep

Later School Start Times

Kyla L. Wahlstrom, Ph.D.

Director – Center for Applied Research and Educational Improvement
University of Minnesota

University of Minnesota research concentrated on high schools in Minnesota and Colorado that changed to a later start time. The study found significant increases and improvements in several measured areas.

Initial Academic Performance Findings in Minneapolis

- Significant increase in attendance rates (pre-post) were identified for 9th, 10th, and 11th grade students in all Minneapolis high schools.
- Graduation rates significantly improved over the three years after the later start time was initiated in Minneapolis.
- A positive trend line was found for pre-post comparisons on actual GPAs of Minneapolis high school students, but were not statistically significant.



Teens & Sleep

National Conference | October 3-4, 2013



UNIVERSITY OF MINNESOTA
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Percentage of HS students sleeping ≥ 8 hours on school nights by start time

- 7:30 AM 33.6 % Fairview HS, CO (2010)
- 8:00 AM 49.7% Mahtomedi, MN
- 8:00 AM 44.5 % Boulder HS, CO
- 8:05 AM 42.5% Fairview HS, CO (2011)
- 8:35 AM 57.0% Woodbury HS, MN
 - 58.9% East Ridge HS, MN
 - 60.0 % Park HS, MN
- 8:55 AM 66.2% Jackson Hole, WY



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The study found that teens were able to get more sleep as start times more closely aligned with their natural sleep patterns, meaning they were more rested and ready to learn.

This study focuses specifically on performance and behavior from an **educational research perspective**.

National Jewish Health – Sleep and Start Times

Lisa J. Meltzer, Ph.D., CBSM
Associate Professor of Pediatrics
National Jewish Health
Division of Behavioral Health, Department of Pediatrics

The study found that students at all levels achieved better academic results and realized other health benefits when school start times aligned with students' sleep patterns.

Later School Start Time Outcomes

- Multiple studies have demonstrated the benefit of changing to a later school start time...
- Students getting > 8 hours sleep/night
- Better academic outcomes
- Better attendance rates
- Higher graduation rates
- Reduced tardiness
- Less depression
- Less caffeine use
- Fewer car crashes

Burgers et al. (2014); Danner & Phillips (2008); McKeever et al. (2017); Owens et al. (2010); Wahlstrom (2002); Wahlstrom et al. (2014); Wolfson et al. (2007)

Deficient Sleep in Teenagers

- Mood and affect changes
- Behavior problems
 - Non-compliance
 - Aggression
 - Hyperactivity
 - Poor impulse control
- Risk taking behaviors and increased accidents



Beebe (2011); Gruber et al. (2012); Owens et al. (2014)

Students functioning with deficient sleep experienced more negative behaviors.

This study focuses specifically on student performance and behavior from a **bio-medical research perspective**.

