



School Start Times Committee: Presentation to Park City School District Board

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On behalf of the School Start Times (SST) Committee

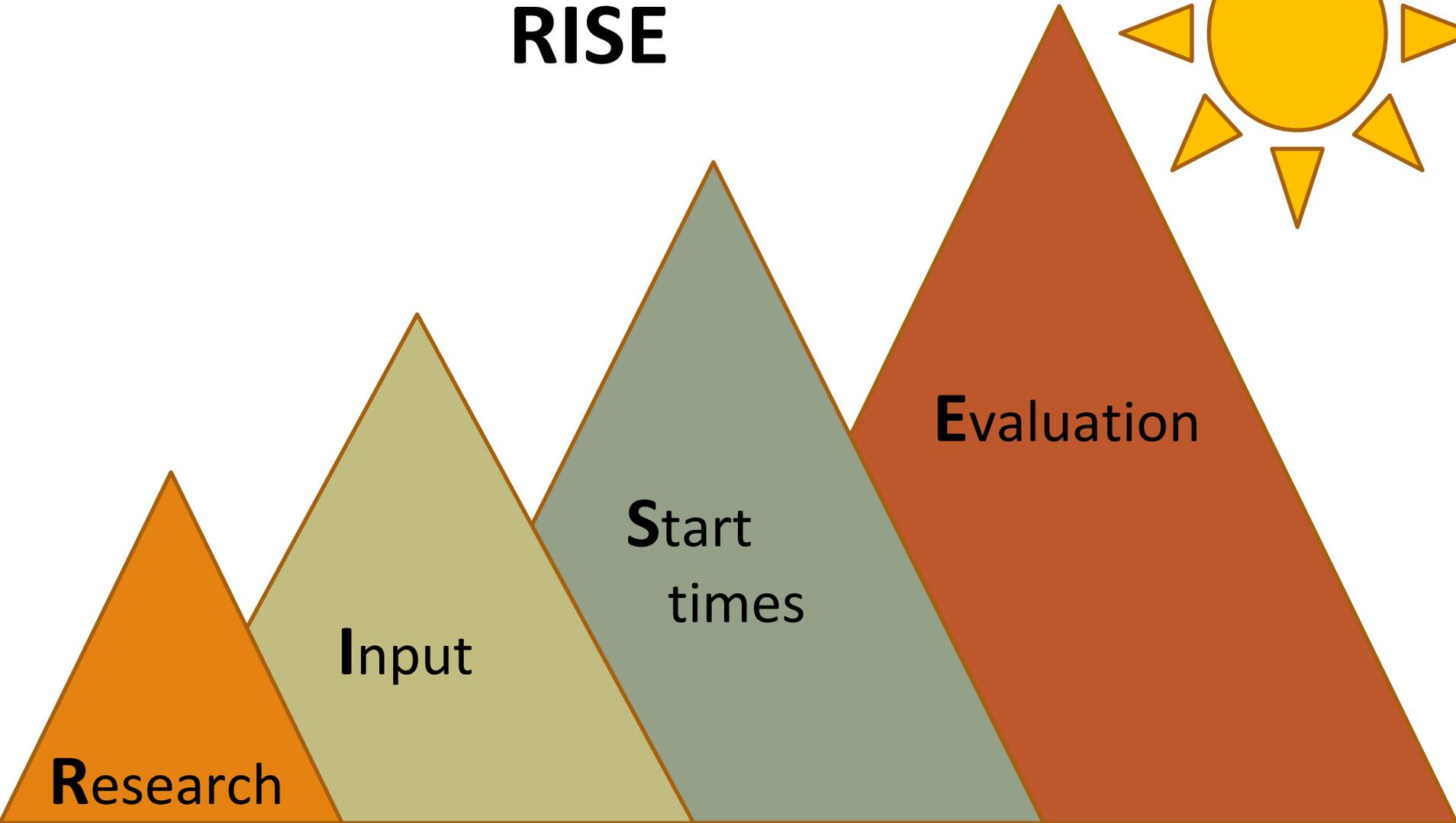
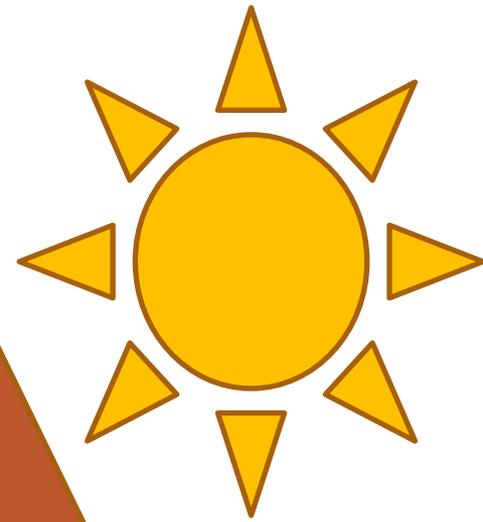
August 23, 2016



SST Committee History

- March 2015 petition led by Dr. John Hanrahan:
 - » 393 signatures supported later school start times
- Spring 2015/ Resumed January 2016: Invitation from Superintendent Conley to participate in committee focused on investigating school start times
- Comprised of district parents, teachers, and principals representing all 4 levels of schools (i.e., elementary, middle, junior high, high school)
- Bi-weekly meetings beginning in January 2016 – with additional meetings of subcommittees:
 - Traffic and Transportation
 - Athletics and Extracurricular activities
 - Survey Development and Analysis
 - Community Education and Engagement
 - Teacher and Staff Engagement
 - Research on other Districts methods and solutions to obstacles

This Presentation Focuses on the Committee's Four Primary Goals: **RISE**



Research

Input

**Start
times**

Evaluation

Adolescent Sleep Patterns

- Biological clocks shift during adolescence toward later bedtimes and later wake-up times.
- Melatonin release is also delayed in teens. (11 pm to 8 am)
- Waking a teen up at 6 am is the equivalent of waking an adult up at 4 am.
- This is a *developmental* condition, not a cultural phenomenon, and it is SPECIFIC to adolescence (i.e., this phase delay reverts to normal in adulthood).

Adolescent Sleep Needs

- Teens need 8-10 hours of sleep per night, but less than 10% regularly achieve a minimum of 8.5 hours of sleep.¹
- According to The Center for Disease Control²:
 - 40% of teens sleep fewer than 6 hours per night
 - 20% sleep in class
- Teens show pathological levels of sleepiness (comparable to narcolepsy patients).³

¹O'Brien & Mindell, 2005

² CDC, Youth Behavior Risk Survey, 2011

³ Carskadon et al; 1998

Impact of Sleep Loss on Adolescent Health and Functioning

- Decreased academic/cognitive functioning
- Increased risk of:
 - Mental health problems (depression, suicide, anxiety, substance abuse)^{1,2}
 - Physical health problems (obesity, diabetes, heart disease)^{1,2}
 - Sports-related injuries³
 - Motor vehicle accidents⁴



¹Owens et al., 2014

²Wheaton et al., 2015

³Milewski et al., 2014

⁴Vorona et al., 2014

Position Statements from Major Medical Organizations

AMERICAN ACADEMY OF PEDIATRICS
AMERICAN MEDICAL ASSOCIATION
CENTERS FOR DISEASE CONTROL

ALL recommend that middle and high schools start no earlier than 8:30 a.m.

ALL recognize that early school start times are a major contributor to the epidemic of adolescent sleep deprivation

What is the evidence from school districts around the country?

An orange triangle pointing upwards, containing the word "Research" in a bold, black, sans-serif font.

Research

Will teens actually *sleep more* or just stay up later?

With later start times,

- Teens get an additional hour of sleep per night on average
- Bed times remain the same
- More morning sleep = more REM sleep
- Even a 30 minute delay results in improvements

¹ Wahlstrom et al., 2014

² Wheaton et al., 2016

Benefits of Later School Start Times: Improved School Performance

- A recent review of 38 studies¹ found that later start times are associated with:
 - Higher attendance
 - Reduced tardiness
 - Reduced drop-out rates
 - Improvements in standardized test scores
 - Better grades
 - Involvement in extra-curricular activities remains the same or increases

Benefits of Later School Start Times: Improved Health & Safety

- **Later start times are associated with improvements in:**
 - Mood (fewer report feeling unhappy, depressed)
 - Health (decreased health center visits)
 - Family well-being (fewer conflicts!)
- **Teton County School District:** 70% reduction in car crashes when the school shifted start times from 7:35 AM to 8:55 AM.

Benefits of Later School Start Times: Narrowing the Achievement Gap

- Disadvantaged students and highest achieving both benefit.
- “Early school start times reduce performance among disadvantaged students by an amount equivalent to having a highly ineffective teacher.”
- Reduced performance translates into roughly \$17,500 in reduced lifetime earnings per student.
- Benefits of later start times far exceeded costs: 9:1 ratio

Community Input/Engagement

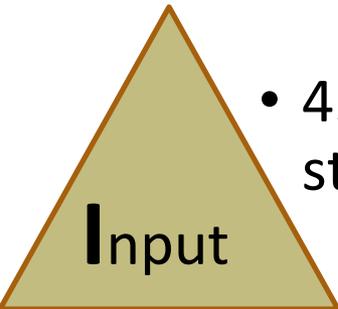


- Public forum for input gathering
- PTO presentation
- District-wide survey
- KPCW interviews
- Park Record articles
- Social Media
- Outreach at churches, school coffees, PTO meetings
- Discussions with key players in Athletics and Transportation
- Latino community engagement

Input

Survey Results

- Nearly 3000 respondents completed the survey within one week, including parents, students, and teachers/staff.
- 66% of respondents favored changing school start times
- Of those favoring a change, the majority (71%) preferred that high school and junior high start later than 8 am
- 42% of high school students currently elect to have late start through parent release.



Input

School Start Times Recommendation

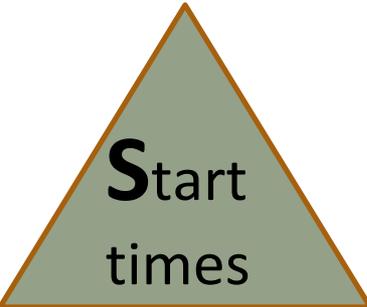
- The committee recommends that PCSD secondary schools start no earlier than 8:30 a.m. beginning with the 2017/2018 school year.



Start
times

Estimated Bell Schedule Based on 8:30 a.m. Start for PCHS/ TMJH

Possible New Bell Schedule		Current Bell Schedule
Elementary Schools	7:45-2:35	8:15-3:05
PCHS/ TMJH	8:30- 3:20	7:35 – 2:25
Ecker Hill Middle School	9:25 – 4:15	8:50 – 3:40



Sstart
times

*Note: These are estimates only, based on projections provided by the district. Actual bell schedule must be determined following testing of bus routes, to be conducted in Fall 2016.

Evaluation and Engagement

- A successful shift in secondary school start times to 8:30 a.m. will require ongoing evaluation and engagement.
- An implementation committee should be formed with PCSD experts, stakeholders, and key members of the Start Times Committee.

Overcoming Implementation Challenges

Academic and Program Planning

- Examination of most efficient scheduling and use of instructional minutes.

Transportation

- Examination of PCSD's current transportation infrastructure and school bus routing software to ensure maximum efficiency.
- Further engagement with Transportation Management (Alfred Knotts) to evaluate traffic mitigation options

Impact on Elementary/ Middle School Children

- Later secondary school start times may require an expansion of elementary after-school programs.
- Pickup times for elementary students—minimizing safety risks at earlier hours

Interscholastic Sports/ Extra-curricular activities

- Ongoing communication with UHSAA 3A Region 10 counterparts regarding scheduling.
- Flexible scheduling options to offset early dismissals for afternoon extracurricular activities

Why not wait for re-alignment?

- This is an immediate public health issue.
- Combining two major changes at once is not necessarily beneficial.
- It is still not definite when re-alignment will occur.
- Rolling out bell-times schedule in 2017/2018 year will allow for ongoing engagement and evaluation, in order to further refine schedules when re-alignment does occur.

Next Steps

- The committee recommends that the Park City School Board and the Superintendent (Dr. Conley)
 - Make a commitment that PCS secondary schools will start no earlier than 8:30 a.m. beginning in the 2017/2018 year.
 - Develop an action plan for a 1-year timeline for implementation

Engagement and Ongoing Evaluation will be the keys to success



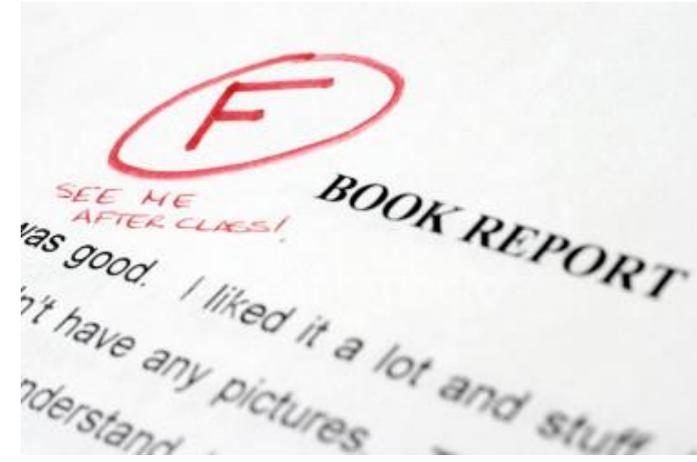
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Backup Slides

Consequences of Sleep Loss: Academic Functioning and Mental Health

- Sleep loss in adolescents is associated with increased risk of:
 - Poorer grades/ scores on standardized tests
 - Truancy and dropouts
 - Reduced problem-solving/ attention
 - Irritability, difficulty getting along with others
 - Depression
 - Anxiety
 - Substance Use
 - Suicide





Consequences of Sleep Loss: Physical Health and Performance

- Shorter sleep duration predicts increased risk of obesity, cardiovascular risk, and type 2 diabetes
- 68% fewer sports injuries among teens who slept at least 8 hours as compared to their sleep-deprived peers
- Sleep loss impairs healing and recovery
- According to Harvard Study: “Applying principles of sleep physiology to competitive sports has the clear potential to yield a significant and natural athletic performance advantage”.

Consequences of Sleep Deprivation: Safety



- Drowsy driving:
 - Over 100,000 motor vehicle crashes per year are caused by drowsy driving
 - Over 50% of drowsy-driving crashes are caused by drivers aged 16-25 years
 - Sleep loss impairments are equal or greater than those due to alcohol intoxication (i.e., 3-4 beers)
- Pedestrian Safety
 - 50% increase in ‘hits’ or ‘close calls’ in virtual reality crosswalks when teenagers are sleep-restricted

School Start Times: Lessons Learned from Other Districts

- District superintendent support and leadership critical
- School board involvement key
- School leadership (i.e., principals) and teacher support vital
- Importance of middle/elementary school principal, teacher, parent involvement
- Importance of student engagement
- Critical role of community *education*
 - Health, safety *and* academics
- Critical role of community *engagement*
 - Identification and involvement of key stakeholders

School Start Times: Lessons Learned from other Districts

- Transportation “drives” the process
 - Biggest source of logistical issues and cost
 - However, may result in cost savings (increased # tiers)
- Critical to allow adequate time for families to become informed and make sufficient plans prior to implementation
- Each community faces different, unique challenges
 - But we don’t have to “reinvent the wheel”
- Anticipation often worse than reality (impact on athletics, teacher retention, after-school programs, childcare issues)
- Initial challenges reduced over time