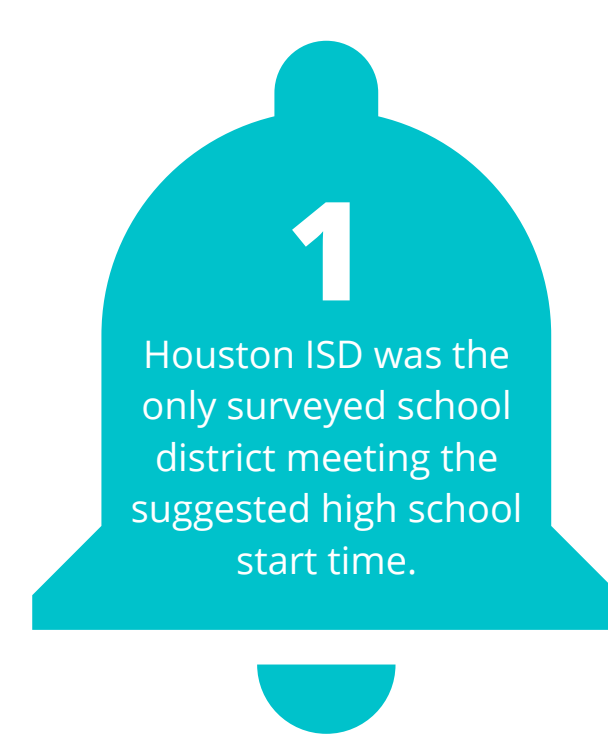


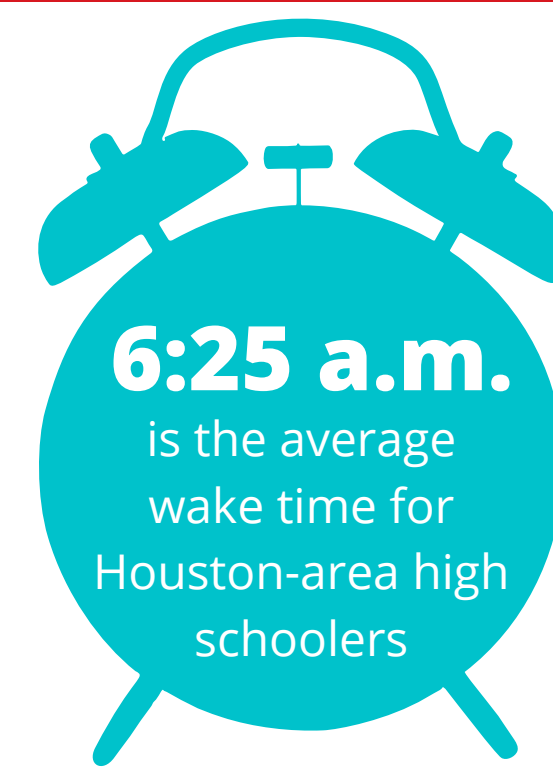
Introduction and Motivations

High school students are notorious for late bedtimes, but today's adolescents have been called the most sleep-deprived population in human history. Pediatricians suggest that teenagers should be getting **8-10 hours** of sleep per night, but most are struggling to find the time. A combination of factors, including heavy workloads, packed extracurricular schedules, and early school start times, keep students from achieving the amount of rest they need to thrive academically and physically. As a result, the Centers for Disease Control and American Medical Association have emphasized that high schools should **start no earlier than 8:30 a.m.** in order to ensure adequate sleep for students. However, few schools have heeded this advice. In the Houston area alone, there is significant variation in high school start times between school districts.

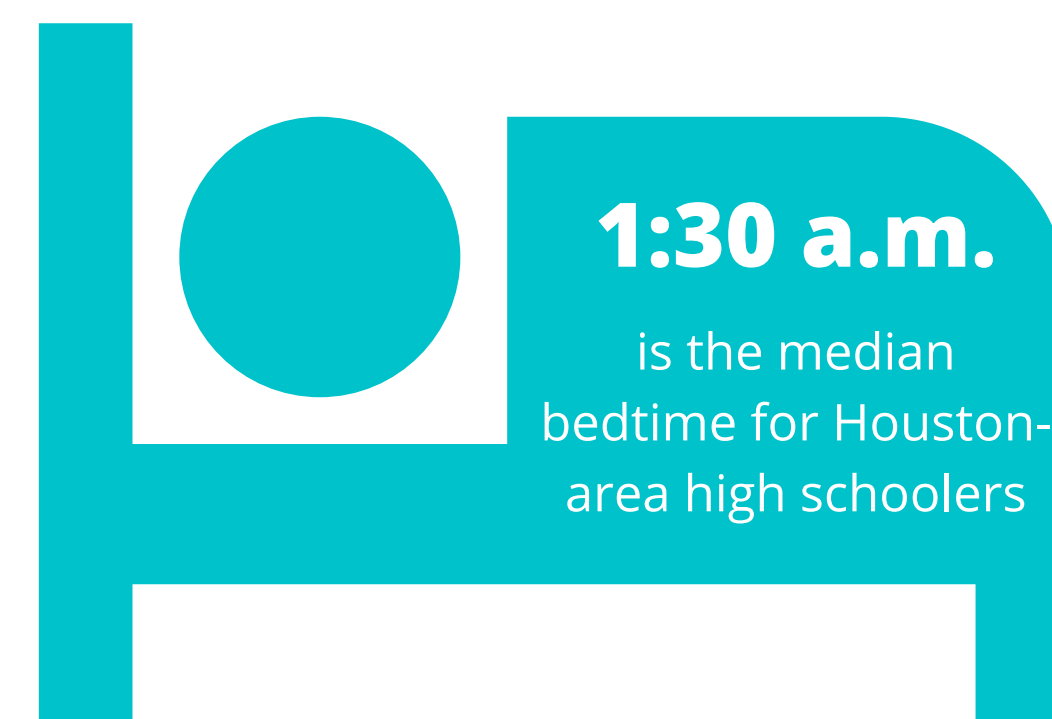
Critical Question: How do current school start times affect Houston-area students and how can school districts adapt to help them get adequate rest?



1
Houston ISD was the only surveyed school district meeting the suggested high school start time.



6:25 a.m.
is the average wake time for Houston-area high schoolers



1:30 a.m.
is the median bedtime for Houston-area high schoolers

Methodology

Forty juniors and seniors representing six districts and three private schools across the Houston metroplex were surveyed to study the relationship between high school start times and student wellness and inform policy suggestions for school officials. The survey of 18 questions covered three main categories: (1) school bell schedule, (2) student time commitments outside of school, and (3) amounts of sleep and feelings of alertness. Survey data was supplemented by a March 2022 report published by the non-profit policy research center, CHILDREN AT RISK, entitled *Rest & Resilience: Securing Children's Well-Being Through Sleep* (copies can be found below). This report offered additional context on the recommended amount of sleep for teenagers and the consequences of inadequate rest.

Results



5 hours
the average amount of time students have after school, homework, extracurriculars, and jobs

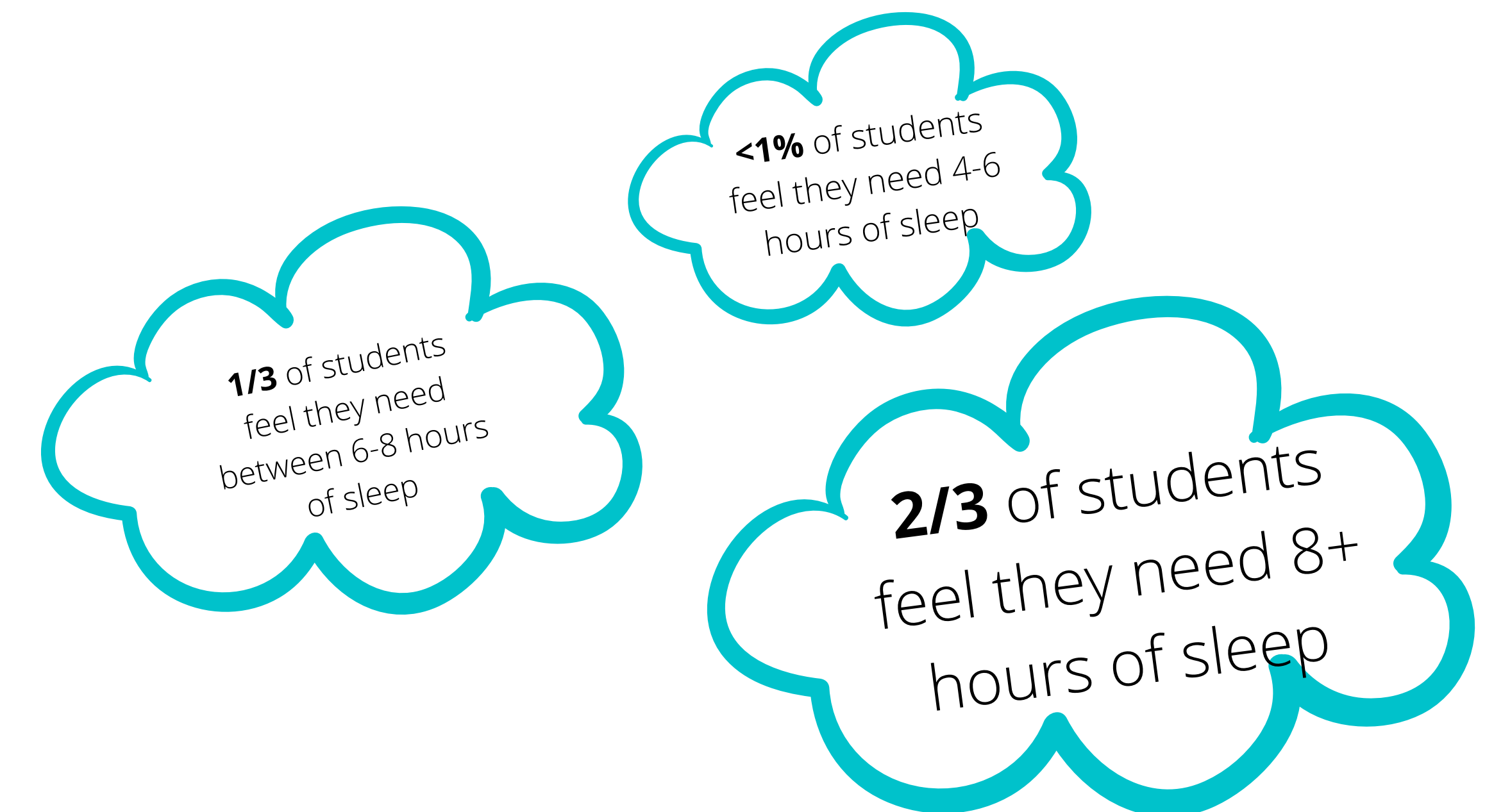
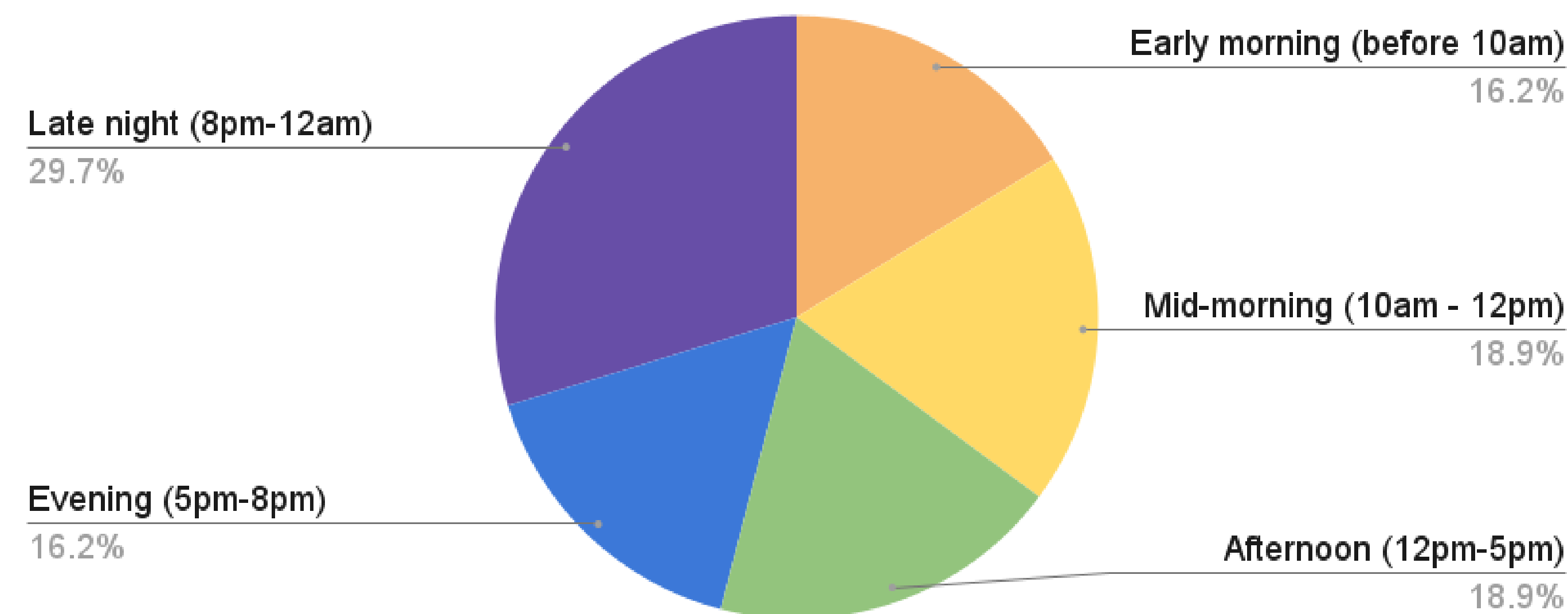


67.5%
of students report falling asleep in class during at least one class of the day



3
school days per week during which students feel mental fog due to tiredness

During what time of day do students feel most focused?



Next Steps and Suggestions

Altering high school start times to align with professional recommendations and student preference is the ideal solution for improving students' sleep habits and focus, as well as public safety. Since this independent study covered juniors and seniors only, it is important to note that many of these students are driving to school. Few consider themselves focused and clear-headed in the early morning, so a later start to the school day could also prevent accidents caused by fatigue or "highway hypnosis." Until approving a new bell schedule, school districts can make strides towards improving students' rest by limiting homework to assignments that are not completed in class or providing time during the school day for extracurricular groups to meet. When it comes to altering the schedule, a later 8:30 a.m. start time comes with a later end to the school day as total instructional minutes per year are set by the state. Two options for pivoting to a later school day without a significant change to school end times include block scheduling and year-round schooling. With a block schedule, students attend half of their classes each day, alternating between two "blocks" of periods. Through this system, it is possible to shorten the school day as students have fewer periods to manage. Year-round schooling involves shortening or removing the long summer break. This would allow school districts to meet the state instructional time requirements and prevent learning loss, while shortening the school day.



328,000
Drowsy-driving crashes each year

Over 50% of these crashes are caused by young adults

Takeaways

- Only students who were able to come to class at 8:00 a.m. or later either due to their bell schedule or a morning off-period were able to achieve 8 or more hours of sleep
- Juniors consistently get less sleep and have less non-work time than seniors
- Students who start school after 8:00 a.m. wake up at 7:00 a.m. on average, while students who start school before 8:00 a.m. wake up at 6:10 a.m. on average.
- Students who spent more time on homework each night were less likely to achieve a full sleep cycle, suggesting that **an inverse relationship exists between the amount of homework students receive and the amount of sleep that they are able to achieve**