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## Article of the Week #6

### *To Keep Teens Alert, Schools Let Them Sleep In*

*By Jan Hoffman March 13, 2014*

#### Instructions: COMPLETE ALL QUESTIONS AND MARGIN NOTES

(-2)Number each paragraph.

(-2)Write the internal citation for this article: ( )

Read the following article carefully and **make notes in the margin** as you read.

Your notes should include:

- Comments that show that you **understand** the article. (A summary or statement of the main idea of important sections may serve this purpose.)
- Questions you have that show what you are **wondering** about as you read ("I don't understand" is not acceptable).
- **Vocabulary words** you do not know.
- Notes that differentiate between **fact** and the author's **opinion**.
- Observations about how the **writer's strategies** (organization, word choice, perspective, support) and choices affect the article.

Your **margin notes** are part of your score for this assessment.

Answer the questions carefully in **complete sentences** unless otherwise instructed.

COLUMBIA, Mo. – Jilly Dos Santos really did try to get to school on time. She set three successive alarms on her phone. Skipped breakfast. Hastily applied makeup while her fuming father drove. But last year she rarely made it into the frantic scrum at the doors of Rock Bridge High School here by the first bell, at 7:50 a.m.

Then she heard that the school board was about to make the day start even earlier, at 7:20 a.m.

"I thought, if that happens, I will die," recalled Jilly, 17. "I will drop out of school!"

That was when the sleep-deprived teenager turned into a sleep activist. She was determined to convince the board of a truth she knew in the core of her tired, lanky body: Teenagers are developmentally driven to be late to bed, late to rise. Could the board realign the first bell with that biological reality?

The sputtering, nearly 20-year movement to start high schools later has recently gained momentum in communities like this one, as hundreds of schools in dozens of districts across the country have bowed to the accumulating research on the adolescent body clock.

In just the last two years, high schools in Long Beach, Calif.; Stillwater, Okla.; Decatur, Ga.; and Glens Falls, N.Y., have pushed back their first bells, joining early adopters in Connecticut, North Carolina, Kentucky and Minnesota. The Seattle school board will vote this month on whether to pursue the issue. The superintendent of Montgomery County, Md., supports the shift, and the school board for Fairfax County, Va., is working with consultants to develop options for starts after 8 a.m.

New evidence suggests that later high school starts have widespread benefits. Researchers at the University of Minnesota, funded by the Centers for Disease Control and Prevention, studied eight high schools in three states before and after they moved to later start times in recent years. In results released Wednesday they found that the later a school's start time, the better off the students were on many measures, including mental health, car crash rates, attendance and, in some schools, grades and standardized test scores.

Dr. Elizabeth Miller, chief of adolescent medicine at Children's Hospital of Pittsburgh, who was not involved in the research, noted that the study was not a randomized controlled trial, which would have compared schools that had changed times with similar schools that had not. But she said its methods were pragmatic and its findings promising.

"Even schools with limited resources can make this one policy change with what appears to be benefits for their students," Dr. Miller said.

Researchers have found that during adolescence, as hormones surge and the brain develops, teenagers who regularly sleep eight to nine hours a night learn better and are less likely to be tardy, get in fights or sustain athletic injuries. Sleeping well can also help moderate their tendency toward impulsive or risky decision-making.

During puberty, teenagers have a later release of the "sleep" hormone melatonin, which means they tend not to feel drowsy until around 11 p.m. That inclination can be further delayed by the stimulating blue light from electronic devices, which tricks the brain into sensing wakeful daylight, slowing the release of melatonin and the onset of sleep. The Minnesota study noted that 88 percent of the students kept a cellphone in their bedroom.

But many parents, and some students, object to shifting the start of the day later. They say doing so makes sports practices end late, jeopardizes student jobs, bites into time for homework and extracurricular activities, and upsets the morning routine for working parents and younger children.

At heart, though, experts say, the resistance is driven by skepticism about the primacy of sleep.

"It's still a badge of honor to get five hours of sleep," said Dr. Judith Owens, a sleep expert at the Children's National Medical Center in Washington. "It supposedly means you're working harder, and that's a good thing. So there has to be a cultural shift around sleep."

Last January, Jilly decided she would try to make that change happen in the Columbia school district, which sprawls across 300 square miles of flatland, with 18,000 students and 458 bus routes. But before she could make the case for a later bell, she had to show why an earlier one just would not do.

She got the idea in her team-taught Advanced Placement world history class, which explores the role of leadership. Students were urged to find a contemporary topic that ignited their passion. One morning, the teachers mentioned that a school board committee had recommended an earlier start time to solve logistical problems in scheduling bus routes. The issue would be discussed at a school board hearing in five days. If you do not like it, the teachers said, do something.

Jilly did the ugly math: A first bell at 7:20 a.m. meant she would have to wake up at 6 a.m.

She had found her passion.

She seemed an unlikely choice to halt what was almost a done deal. She was just a sophomore, and did not particularly relish conflict. But Jilly, the youngest of seven children, had learned to be independent early on: Her mother died when she was 9.

And she is energetic and forthright. That year, she had interned on a voter turnout drive for Missouri Democrats, volunteered in a French-immersion prekindergarten class, written for the student newspaper, worked at a fast-food pizza restaurant and maintained an A average in French, Spanish and Latin.

“It’s about time management,” she explained one recent afternoon, curled up in an armchair at home.

That Wednesday, she pulled an all-nighter. She created a Facebook page and set up a Twitter account, alerting hundreds of students about the school board meeting: “Be there to have a say in your school district’s decisions on school start times!”

She then got in touch with Start School Later, a nonprofit group that provided her with scientific ammunition. She recruited friends and divided up sleep-research topics. With a blast of emails, she tried to enlist the help of every high school teacher in the district. She started an online petition.

The students she organized made hundreds of posters and fliers, and posted advice on Twitter: “If you are going to be attending the board meeting tomorrow we recommend that you dress up!”

The testy school board meeting that Monday was packed. Jilly, wearing a demure, ruffled white blouse and skirt, addressed the board, blinking owl-like. The dignitaries’ faces were a blur to her because while nervously rubbing her eyes, she had removed her contact lenses. But she spoke coolly about the adolescent sleep cycle: “You know, kids don’t want to get up,” she said. “I know I don’t. Biologically, we’ve looked into that.”

The board heatedly debated the issue and decided against the earlier start time.

The next day Jilly turned to campaigning for a later start time, joining a movement that has been gaining support. A 2011 report by the Brookings Institution recommended later start times for high schools, and last summer Arne Duncan, the secretary of education, posted his endorsement of the idea on Twitter.

The University of Minnesota study tracked 9,000 high school students in five districts in Colorado, Wyoming and Minnesota before and after schools shifted start times. In those that originally started at 7:30 a.m., only a third of students said they were able to get eight or more hours of sleep. Students who got less than that reported significantly more symptoms of depression, and greater use of caffeine, alcohol and illegal drugs than better-rested peers.

“It’s biological — the mental health outcomes were identical from inner-city kids and affluent kids,” said Kyla Wahlstrom, a professor of educational research at the University of Minnesota and the lead author of the study.

In schools that now start at 8:35 a.m., nearly 60 percent of students reported getting eight hours of sleep nightly.

In 2012, the high school in Jackson, Wyo., moved the first bell to 8:55 a.m. from 7:35 a.m. During that academic year, car crashes by drivers 16 to 18 years old dropped to seven from 23 the year before. Academic results improved, though not across the board.

After high schools in the South Washington County district, outside Minneapolis, switched to an 8:35 a.m. start, grades in some first- and third-period classes rose between half a point and a full grade point.

And the study found that composite scores on national tests such as the ACT rose significantly in two of the five districts.

Many researchers say that quality sleep directly affects learning because people store new facts during deep-sleep cycles. During the rapid-eye-movement phases, the brain is wildly active, sorting and categorizing the day's data. The more sleep a teenager gets, the better the information is absorbed.

"Without enough sleep," said Jessica Payne, a sleep researcher and assistant professor of psychology at the University of Notre Dame, "teenagers are losing the ability not only to solidify information but to transform and restructure it, extracting inferences and insights into problems."

Last February, the school board in Columbia met to consider later start times. "It is really reassuring to know that students can have a say in the matter," Jilly told them. "So thank you, guys, for that."

The moment of decision arrived at the board's next meeting in March. Jilly sat in the front row, posting on Twitter, and addressed the board one last time. "I know it's not the most conventional thing and it's going to get some pushback," she said, referring to the later time. "But it is the right decision."

The board voted, 6 to 1, to push back the high school start time to 9 a.m. "Jilly kicked it over the edge for us," said Chris Belcher, the superintendent.

It is now seven months into the new normal. At Rock Bridge High School, the later end to the day, at 4:05 p.m., is problematic for some, including athletes who often miss the last period to make their away games.

"After doing homework, it gets to be 11:30 p.m. pretty quickly," said Brayden Parker, a senior varsity football player. "I would prefer to get home by dark and have more time to chill out."

The high schools in the district have tried to adjust, for example by adding Wi-Fi access to buses so athletes can do homework on the road. Some classes meet only one or two days a week, and are supplemented with online instruction. More sports practices and clubs convene before school.

Some parents and first-period teachers are seeing a payoff in students who are more rested and alert.

At 7:45 a.m. on a recent school day, Rock Bridge High, a long, one-story building with skylights and wide hallways, was sun-drenched and almost silent.

Then, like an orchestra tuning up, students gradually started arriving, some for debate club and choir, others to meet in the cafeteria for breakfast and gossip. Laughter crackled across the lobby, as buses dropped off more students, and others drifted in from the parking lots. The growing crowds could almost be described as civilized.

At 8:53 a.m., Jilly burst through the north entrance door, long hair uncombed and flyaway, wearing no makeup, lugging her backpack.

"Even when I am late to school now," she said, dashing down a corridor to make that 8:55 bell, "it's only by three or four minutes."

1.

# Sweet Dreams

2.

## *To Keep Teens Alert, Schools Let Them Sleep In*

By Jan Hoffman

***Write the answers to these questions on your own paper; use complete sentences.***

1. How many hours of sleep do you usually get each night? Do you think this is more or less than your friends/classmates? What makes you think this?
2. Hyperbole is the use of over-exaggeration to make a point. Find and write down the quote from Jilly Dos Santos that employs hyperbole. Does this line effectively communicate her feelings about the situation she faced? Why or why not?
3. Ethos is used by a writer to establish credibility. Examine the article and give an example of Jan Hoffman effectively using ethos to impress her reader.
4. According to the article, what are some of the advantages of a later high school start time? What are some of the disadvantages?
5. According to the article, what percentage of teenagers keep a cellphone in their bedrooms? Why is it a bad idea to sleep in a room with a cellphone?
6. List a few of the activities Jilly Dos Santos participated in during the year she petitioned the school board. What can we infer about her from this list?
7. When addressing her classmates via Twitter, Dos Santos encouraged them to dress up for the school board meeting. Why?
8. Look at Hoffman's use of the adjective "testy" in the article. From the context of the sentence, write down what you think the word "testy" means. Then, look the word up in a dictionary and write the actual definition. How close were you to guessing the word's actual meaning?
9. What happens in our brains while we sleep? Find and write the sentence from the article that best describes this.
10. Toward the end of the article, Hoffman uses a simile that reveals her opinion about this issue. First, find and write the simile from the article. Then, explain whether you believe Hoffman is in favor of shifting high school students to a later start time. What makes you think this?