

Grade 11 -- Informational

Sleep: Teens Need It!

Losing Sleep

The world we live in today is filled with high-tech sleep stealers, such as television, computers, cell phones, and MP3 players, all of which cut into sleep time and make teenagers feel active and alert when they should be considering shutting down their systems for the night. As convenient and exciting and entertaining as all this technology may be, it is encroaching on a good night's sleep. Late-night activities and constant communication with friends, coupled with the need to surf the Web, are inviting outlets for teens whose days are often hectic and filled with stress. It is vital that the circadian rhythm, or the 24-hour activity cycle of the human body, includes an adequate amount of sleep. However, as teens today deal with numerous social and academic pressures, extracurricular activities, sports, and employment, sleep deprivation has become a matter of grave concern. With all these competing interests, it's no wonder teens end up fighting against their brains' and bodies' natural tendency to crave sleep.

Today's teen lives in a 24-hour society where sleep is a luxury. Most are not only chronically sleep-deprived but are in sleep debt. They experience many long hours of wakefulness and irregular sleep/wake schedules. The constant cheating on sleep causes untold wear and tear on their bodies.

The Consequences

Sleep deprivation is a rampant problem among teens and affects them in many ways. Adolescents are at risk for cognitive and emotional difficulties, impaired school performance, traffic accidents, and feelings of anxiety, depression, and hopelessness. Insufficient sleep results in decreased ability to focus on tasks and impaired attention and concentration, making it difficult for teens to excel in school. Is it any wonder that sleep deprivation leads to irritability and mood disorders?

The average teen needs at least 8 hours of sleep to stay alert all day. In 1964, Randy Gardner, who was then seventeen, stayed awake for eleven days, setting the record for sleep deprivation. During this time, he experienced blurred vision and incoherent speech, saw objects as people, and even suffered from paranoia. However, he recovered quickly when he finally slept—8 hours on the first night and 15 hours on the next.

Benefits of Sleep

Why is the right quantity and quality of sleep so critical? During sleep, the body and brain recuperate, restore, rejuvenate, and reenergize. Sleep enhances mood, perception, memory, reaction time, productivity, performance, creativity, longevity, and energy. The various activities of the sleeping brain play a vital role in regulating the body, including the immune system. A strong immune system is necessary to combat illnesses, environmental pollutants, and other stresses on the body.

Sleep Cycle

During sleep, the body experiences a five-stage sleep cycle. Each stage lasts about 10 to 20 minutes and is repeated five to six times during the night. Stages one and two occur when we first fall asleep. We disengage from our surroundings, our brain activity diminishes, our muscles relax, and our body temperature decreases. Stages three and four are the deepest and most restorative periods of sleep. Breathing and heart rate slow, blood supply to muscles increases, tissue growth and repair occurs, and hormones essential for growth and development are

released. These hormones include ghrelin and leptin, which regulate the feelings of hunger and fullness. Stage five is the rapid-eye-movement, or REM, sleep stage. REM recurs about every 90 minutes, and its duration increases later in the night. The body becomes immobile and relaxed, muscles shut down, eyes dart back and forth, the brain is activated, and dreams occur. REM sleep plays a major role in memory storage, retention, and organization. By providing energy, REM sleep prepares our bodies and minds for success the next day.

A Sleep Schedule

Four guidelines pertaining to sleep are recommended for a healthy lifestyle. We need to get enough sleep every night. Most people need at least 60 to 90 minutes more sleep than they usually get each night. We need to establish a regular sleep schedule, which means going to bed and waking up at the same time every day, even on the weekends. The body needs continuous sleep so that it can restore itself. Interrupted sleep disrupts the sleep cycles and can cause drowsiness the next day. Lost sleep can be recouped by going to bed earlier and returning to a regular sleep schedule as soon as possible.

Quality and Quantity

The quality and quantity of a person's sleep is a major factor in overall health and performance. Teens, who may still be growing and who live an active, demanding lifestyle, require even more sleep than most adults. High-quality sleep gives teens the power to face the new day with energy and awareness. A third of their lives is spent sleeping, but this time is far from unproductive. It profoundly affects the success and good health they enjoy during the other two-thirds of their lives.

1) In paragraph 6 the author explains the five-stages of the sleep cycle. How is the paragraph organized? (LA.12.1.6.e)

- a) categorical
- b) sequential
- c) spacial
- d) time order

2) What is the organizational pattern used to describe the personal experience of Randy Gardner in paragraph 4? (LA.12.1.6.e)

- a) fact and opinion
- b) cause and effect
- c) sequence of events
- d) question and answer

3) What is the meaning of the word **rampant** in paragraph 3? (LA.12.1.6.d)

- a) abandoned
- b) hindered
- c) restrained
- d) uncontrolled

4) What does the word **encroaching** mean in paragraph 1? (LA.12.1.6.d)

- a) keeping low
- b) keeping off
- c) permitting
- d) trespassing

5) What is the meaning of circadian rhythm in paragraph 1? (LA.12.1.6.d)

- a) cycle of the human body
- b) cycle of sleep of average teen
- c) cycle of symptoms from sleep deprivation
- d) cycle of technological distractions interrupting sleep

6) Which phrase describes how the author views sleep deprivation? (LA.12.1.5.a)

- a) a necessary evil
- b) a normal teenage phenomenon
- c) a national problem among teens
- d) a situation that can be fixed in one day

7) Which word in paragraph 2 has the root word meaning **time**? (LA.12.1.5.a)

- a) chronically
- b) constant
- c) irregular
- d) wakefulness

8) What does the prefix **re** mean in the phrase, "recuperate, restore, rejuvenate, and reenergize"? (LA.12.1.5.a)

- a) again
- b) never
- c) once
- d) sometimes

C4L Reading - Item Writing Tally Sheet

Grade 12 - Informational

Passage Name: Sleep: Teens Need It

Gr12 Vocabulary	DOK Levels	DOK 1	DOK 2	DOK 3	Total Items
LA 12.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 12.1.5.a <i>Determine meaning of words through structural analysis, using knowledge of Greek, Latin, and Anglo-Saxon roots, prefixes, and suffixes to understand complex words, including words in science, mathematics, and social studies</i>	1, 2	1	2		3
LA 12.1.5.c <i>Independently apply appropriate strategy to determine meanings of unknown words in text</i>	2		3		3
LA 12.1.5.d <i>Use semantic relationships to evaluate, defend, and make judgments</i>	2,3				
Gr12 Comprehension	DOK Level	DOK 1	DOK 2	DOK 3	Total Items
LA 12.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 12.1.6.a <i>Evaluate the meaning, reliability, and validity of the text considering author's purpose, perspective, and information from additional sources</i>	2, 3				
LA 12.1.6.c <i>Analyze the function and critique the effects of the author's use of stylistic and literary devices (e.g., allusion, symbolism, irony, foreshadowing, flashback, metaphor, personification, epiphany, oxymoron, dialect, tone, mood, transitional devices)</i>	2, 3				
LA 12.1.6.d <i>Summarize, analyze, synthesize, and evaluate informational text</i>	2, 3		1		1
LA 12.1.6.e <i>Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion, proposition/support, concept definition, question/answer)</i>	2		2		2

<p>LA 12.1.6.f <i>Analyze and evaluate information from text features (e.g., index, annotations, photographs, charts, tables, graphs, headings, subheadings, lists)</i></p>	2, 3				
<p>LA 12.1.6.g <i>Analyze and evaluate inferences based on the characteristics of narrative and informational genres and provide evidence</i></p>	2, 3				
<p>LA 12.1.6.j <i>Generate and/or answer literal, inferential, critical, and interpretive questions, analyzing, synthesizing, and evaluating prior knowledge, information from the text and additional sources, to support answers</i></p>	1, 2, 3				

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