

**ASLEEP AT
THE WHEEL:**
The Dangers of
Drowsy Driving

ASLEEP AT THE WHEEL: THE DANGERS OF DROWSY DRIVING

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ASLEEP AT THE WHEEL: THE DANGERS OF DROWSY DRIVING

TABLE OF CONTENTS

Introduction	1
Learning Objectives	2
Program Summary	3

STUDENT ACTIVITIES

1. Pre/Post Test	7
2. Your Sleep Log	9
3. Research Project	11
4. The Road to Better Sleep	13
5. Sleep Survey	15
6. Two Endings	17
7. Drowsy Driving Risks	19
8. Class Debate	20
9. How Sleep Works	21
10. Sleep Disorders	23
11. True Stories	24
12. My Pledge	25

FACT SHEETS

1. Stages of Sleep	26
2. Sleep Deprivation	27
3. Roadblocks to Good Sleep	28
4. Sleep Tips	29
5. Drive Safely	30
6. Resources	31
7. Bibliography	32
Other Programs from Human Relations Media	33

When a tired teen gets behind the wheel, sleep deprivation becomes not only inconvenient, but potentially deadly. Each year there are over 100,000 crashes and 1,500 deaths due to drivers who fall asleep while they are at the wheel of a car. Studies have shown that being awake for 18 hours has the same effect on the body as having a blood alcohol content of 0.08 percent—a BAC level considered legally drunk in most states. With delayed reflexes and vision problems, sleep-deprived teen drivers are a danger to both themselves and everyone else on the road.

Drowsy driving may be more common than most people realize. According to 2004 AAA Foundation for Traffic Safety Internet survey, nine out of every ten American police officers have stopped a driver they believed to be drunk, but who turned out to be drowsy. The National Highway Traffic Safety Administration estimates that each year, up to 100,000 police-reported crashes involve drowsiness as a principal cause. Furthermore, it is suspected that this number is significantly under-reported, as studies indicate that less than one-half of all car crashes are reported to the police.

The widespread nature of drowsy driving has even led to government action. Maggie's Law, introduced in New Jersey in 2003, was named after Maggie McDonnell—a 20-year old college student who was killed after a drowsy driver crossed three lanes of traffic and struck her head on. The driver, who admitted to not having slept for 30 hours prior to the accident, was only convicted of careless driving and fined a mere 200 dollars because the jury was not allowed to consider drowsiness as a factor. Maggie's Law calls for the creation of traffic safety programs and the promotion of various anti-drowsy driving countermeasures such as rumble strips to reduce crashes related to driver fatigue.

No driver is immune to drowsiness; anyone who operates a vehicle must be alert and aware at all times. Nevertheless, some groups are more at risk for drowsy driving than others. Two of the most prominent high-risk groups are night-shift workers and young people. Over half of all drowsy driving accidents are caused by drivers age 25 and under.

Asleep at the Wheel: The Dangers of Drowsy Driving takes an in-depth look at the phenomenon of drowsy driving and the dangers associated with it by presenting hard-hitting facts and linking them with real-life stories about people whose lives were affected by drowsy driving. This video will help young drivers understand that falling asleep behind the wheel of a car is a serious danger comparable to drunk driving, and should be treated as the genuine hazard it is.

LEARNING OBJECTIVES

After watching the video *Asleep at the Wheel: The Dangers of Drowsy Driving* and participating in the class activities included in this Teacher's Resource Book, your students will be able to:

- understand the dangers of driving while tired
- identify many popular (and inaccurate) techniques that do not work to keep them from falling asleep at the wheel
- list safe ways of staying alert while driving
- recognize how alcohol increases the risks of drowsy driving
- understand the possible legal ramifications of drowsy driving
- identify warning signs of drowsy driving
- list the appropriate steps to take in order to insure safe and wakeful driving
- identify ways of maintaining a consistent, healthy sleeping schedule
- explain the basic stages of sleep
- identify the attributes of several sleeping disorders
- be on the alert for signs of driver drowsiness, both in themselves and in others

The program begins with Megan Siemers, a young woman who describes the night that she fell asleep while driving. She tells viewers about the crash that resulted. The program then cites national statistics about drowsy driving: 37 percent of drivers in a recent poll admitted to having fallen asleep at least once while driving. Over 100,000 crashes a year and 1,500 fatalities are attributed to drivers who fell asleep behind the wheel of a vehicle. The program notes that over half of all drowsy driving crashes were caused by drivers under the age of 25, despite the fact that young drivers only represent about 19 percent of all drivers.

Next, the video describes research that shows adolescents need, on average, over nine hours of sleep each night. Yet because of school pressures, active social lives and other factors, most teens are lucky if they sleep seven hours a night—two hours less than their bodies need.

Rusty Burris appears next. He describes how he ignored the warning signs of drowsy driving when he was a teenager. He explains that he had been awake for over 36 hours, but managed to convince his girlfriend that he was all right to drive home. “It was kind of a bragging rights thing,” he says. “Look what I can do on little sleep. Look at how long I can stay up and still function.” When he was less than 90 seconds away from his home, Rusty—who was not wearing a seatbelt—suddenly crashed into a driveway embankment, flipped his car, and was ejected through the sunroof onto the highway. The crash left him paralyzed from the chest down.

The program then describes important warning signals that should alert drivers that they are in danger, including rubbing eyes, nodding, yawning, trouble keeping head up, day dreaming and drifting out of your lane. The narrator then moves onto popular but ineffective methods of staying alert. “Even when they recognize the warning signals, many drivers think that there are tricks to fight off the drowsiness, but these tricks don’t work or only work momentarily,” the narrator says. Turning on the air conditioner, opening the window and turning up the radio volume are all ineffective. The narrator emphasizes that the most important thing to do when you feel drowsy is to get off the road. Drivers should then get some caffeine. Caffeinated mints or gum are effective, as is coffee, but it takes about 30 minutes for two cups of coffee to kick in. Thus, it’s important to allow yourself a 15-30 minute nap. Depending on the time of day and the quality of the nap, the combination of caffeine and rest will typically revive the driver for two-to-three hours.

Next viewers meet Jodi Mindell, a sleep expert and professor of psychology at St. Joseph’s University. She explains that most people are not good at recognizing how sleepy they really are. When a person becomes sufficiently sleepy, his brain will involuntarily shut down for three-to-five second intervals called *microsleeps*. “You can’t will yourself not to fall asleep,” Mindell says. “So your eyes may look open, and you may look like your driving, but your brain is asleep. You’re not going to see that traffic light, you’re not going to see that stop sign, you’re not going to see that car pull in front of you.”

The narrator then tells viewers that it isn't enough to be on the lookout for signs of sleepiness. Drivers must also be aware of factors that can put them at risk even when they don't realize they are tired. A series of questions are presented:

Have you been awake for 20 hours or more?

Have you gotten six hours of sleep or less in the last 24 hours?

Have you taken any medications that cause drowsiness?

Do you have a sleep disorder?

The program reveals that there are certain times of day when the risk of falling asleep is greater than other times. The two key times are early in the morning, and early in the afternoon. Mindell returns to tell viewers, "You think that most drowsy driving crashes occur between midnight and six in the morning—and they do—but the second peak time is between one and four in the afternoon, right when teenagers are driving home from school."

Another particularly dangerous time is right after a party or an event that involves a lot of stimulation and energy. The adrenaline from that event often makes drivers feel very energetic while they are active, but once they get into the car, their fatigue may finally hit them and they will feel very sleepy. Mindell says, "It's going to mask that sleepiness. It's going to make it so you don't realize how sleepy you are."

Next, the program notes that studies in sleep labs have shown that the impairment to driving while drowsy is similar to the impairment to driving while under the influence of alcohol. "Researchers have found that if you haven't had a night's sleep or if you have not been getting enough sleep in a long time," the narrator says, "the effect on your driving can be the same as if your blood alcohol concentration (BAC) level was 0.08 percent, the legal limit in most states." Jodi Mindell explains how drinking alcohol and drowsiness are two problems that can compound each other. "If you are drinking and driving while drowsy, it's dramatically worse. It's going to make one beer feel like three or four beers."

Carol McDonnell is introduced next. She describes how her daughter Maggie was killed by a driver who fell asleep behind the wheel. Charged with vehicular manslaughter, he was acquitted by a jury and given a small fine for the lesser offense of reckless driving because his lawyer had argued that there were no laws against driving while drowsy.

Carol McDonnell then describes how she campaigned to change the laws to punish anyone who causes a crash due to drowsy driving. In 2003, the state of New Jersey passed Maggie's Law, which makes it a felony punishable by up to 10 years in prison and a 150,000 dollar fine if you cause a fatality as a result of being awake for more than 24 hours.

“I think people should be held accountable, because [drowsy driving] is a choice,” Carol McDonnell says. “You know if you haven’t slept in 24 hours. You know if you haven’t slept in 18 hours, and you know if you’re tired. And if you choose to put yourself to the test and fail... and if you fail by killing someone else, you deserve to be held accountable for it.”

The narrator urges young drivers to take certain precautions before they get behind the wheel of a car. Getting adequate sleep, not driving while tired, driving with a companion on long trips and stopping every 100 miles or so to switch drivers will all help avoid drowsy driving accidents.

Rusty Burris returns to tell viewers, “I really feel there is a need to educate people on the dangers of drowsy driving. I want to use my experience to help educate other people.” Megan Siemers says, “I think it’s important to listen to your body so that you’re not pushing yourself to the point of exhaustion. It takes a mature person to realize that I am tired and I shouldn’t get into that car.” Carol McDonnell closes the program, urging young drivers to take precautions. She advises, “Drowsy driving is on the same page as drunk driving. It’s an impairment. You should never drive impaired.”

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STUDENT ACTIVITIES

Name: _____

Pre/Post Test

Decide whether the following statements are true or false.

1. TRUE or FALSE: Teenagers need about seven hours of sleep each night. _____
2. TRUE or FALSE: Turning on the air conditioning is a good way to stay alert when driving. _____
3. TRUE or FALSE: It takes about 30 minutes to feel the effects of caffeine. _____
4. TRUE or FALSE: Driving while tired can cause as much impairment as driving while drunk. _____
5. TRUE or FALSE: It is possible to be tired or sleepy and not notice it. _____
6. TRUE or FALSE: Turning the radio all the way up and opening the window are good ways to stay awake when driving. _____
7. TRUE or FALSE: Young drivers are involved in over half of all crashes caused by drowsy driving. _____
8. TRUE or FALSE: The two most common times for drowsy driving crashes are between midnight and six in the morning and between ten and midnight at night. _____
9. TRUE or FALSE: People can always choose when they will fall asleep. _____
10. TRUE or FALSE: Adrenaline from a party or other activity can temporarily mask sleepiness. _____

The Answer Key to this activity appears on the next page.

Name: _____

ANSWER KEY

- | | | |
|-----|--|-------|
| 1. | TRUE or FALSE: Teenagers need about seven hours of sleep each night. | FALSE |
| 2. | TRUE or FALSE: Turning on the air conditioning is a good way to stay alert when driving. | FALSE |
| 3. | TRUE or FALSE: It takes about 30 minutes to feel the effects of caffeine. | TRUE |
| 4. | TRUE or FALSE: Driving while tired can cause as much impairment as driving while drunk. | TRUE |
| 5. | TRUE or FALSE: It is possible to be tired or sleepy and not notice it. | TRUE |
| 6. | TRUE or FALSE: Turning the radio all the way up and opening the window are good ways to stay awake when driving. | FALSE |
| 7. | TRUE or FALSE: Young drivers are involved in over half of all crashes caused by drowsy driving. | TRUE |
| 8. | TRUE or FALSE: The two most common times for drowsy driving crashes are between midnight and six in the morning and between ten and midnight at night. | FALSE |
| 9. | TRUE or FALSE: People can always choose when they will fall asleep. | FALSE |
| 10. | TRUE or FALSE: Adrenaline from a party or other activity can temporarily mask sleepiness. | TRUE |

Name: _____

ACTIVITY 2A
YOUR SLEEP LOG

Here's your chance to determine how healthy your sleeping habits are by keeping this sleep log for ten days. Begin your log on a Friday night and continue collecting information through the following Monday. Start by writing down what time you go to bed each night and what time you woke up. Round each time to the nearest quarter hour (for example, if you went to bed at 11:23 pm, write down 11:30). Use the time you went to bed the night *before* as you fill in each row—if you are filling in the “Saturday” row, write down what time you went to bed Friday night. Then, rate your energy on a 1-5 scale three times each day—at 10:00 in the morning, 3:00 in the afternoon and 10:00 in the evening. Use this key:

1 = very exhausted 5 = very energetic

The first line is a sample for you to follow.

Day of the week	Bedtime (night before)	Wake Up Time	Hours of Sleep	Energy: 10 am	Energy: 3 pm	Energy: 10 pm
<i>Tuesday</i>	<i>11:30 pm</i>	<i>6:15 am</i>	<i>6.75</i>	<i>3</i>	<i>2</i>	<i>3</i>
<i>Saturday</i>						
<i>Sunday</i>						
<i>Monday</i>						
<i>Tuesday</i>						
<i>Wednesday</i>						
<i>Thursday</i>						
<i>Friday</i>						
<i>Saturday</i>						
<i>Sunday</i>						
<i>Monday</i>						

This activity is continued on the next page.

Name: _____

After your ten days are over, look back on your sleep log and answer the questions below.

1. On average, how many hours of sleep did you get each week night?

2. On average, how many hours of sleep did you get each weekend night?

3. How did your weekend sleep habits compare to your weekday habits?

4. What connection did you notice between how much sleep you got at night and how energetic you felt the next day?

5. In general, at what time of day did you feel most exhausted? At what time did you feel most energetic?

Consult the *Sleep Tips* fact sheet for information on how to improve your sleep habits.

Name: _____

Find out more about sleep and drowsy driving by choosing one of the topics below and writing a brief research paper about it. Look for information in books, scientific journals, magazines and reputable websites. Keep a record of all your sources with a *Resource Tracker* sheet.

Sleep Deprivation and the Body

What happens to your body when you don't get the sleep you need? What kind of health consequences do sleep-deprived teens face? Do some research on topics such as acne, obesity and the immune system. What do these health problems have to do with sleep?

Sleep Disorders

What are the most common sleep disorders, and what causes them? Who is at risk? What symptoms and consequences are associated with each one? How are they treated? Possible disorders to research include sleep apnea, insomnia, periodic limb movement disorder, restless legs syndrome and nightmares.

Drowsy Driving and the Law

You learned about Maggie's Law in New Jersey—but what about the rest of the country? Are other states enacting similar laws? Do drowsy drivers suffer different consequences in different states? Possible topics include following the progress of Maggie's Law on the national level, and comparing different state laws about drowsy driving.

Sleep and Nutrition

How does what you eat affect how you sleep? Is it possible to control your diet so that you sleep better at night? Are there foods you should or shouldn't eat before getting behind the wheel of a car? Try looking at the effects of caffeine, or compare foods high in fat and grease content with foods low in fat and grease. Who should be controlling their diet?

Sleep Cycles

Does everybody naturally want to go to sleep and wake up at the same time? Are different groups of people naturally predisposed towards different sleep cycles? Why do some people need to sleep more than others? Does this change as people get older? Can things like stress or schoolwork affect somebody's sleep cycle?

Name: _____

THE ROAD TO BETTER SLEEP

Are you getting all the sleep you need? Chances are, the answer is no. The National Sleep Foundation reports that 85 percent of teens don't get enough sleep. Between school, sports, clubs, and work, it may seem like you just don't have enough hours each day. But sleep is important! You simply can't be at your best if you haven't had enough sleep. The good news is that you can improve your sleeping habits with a little planning. Use this activity to pinpoint where you need work and create ways to improve in those areas.

PART ONE: Evaluation

Just how smart are you when it comes to sleep? Evaluate your habits by answering the questions below. Be honest!

	YES / NO
Do you get fewer than 8½ hours of sleep most nights?	
Do you go to bed and get up much later on weekends than you do on weekdays?	
Do you often take long naps in the evening?	
Do you drink caffeine after mid-afternoon?	
Do you often eat a big snack right before bed?	
Is your bedroom too bright or noisy at night?	
Do you often fall asleep in front of the TV?	
Do you often do homework or read complex books right before bed?	

Each of your “yes” answers represents a potential “sleep roadblock,” an area where you can work towards improvement. The more you do to change those habits, the better your sleep will be, and the better you will feel!

This activity is continued on the next page.

Name: _____

PART TWO: Planning

Now that you know where you need improvement, it's time to create a plan that will help you rest easier. Consult the *Roadblocks to Good Sleep* fact sheet for more information. For each roadblock that you checked in Part One, fill out an improvement plan below. If you checked more than one box, continue on a separate sheet of paper. Use the sample below as a guide.

Sleep Roadblock: *Exercising within a few hours of bedtime.*

Why do I have this roadblock? *Between homework, drama club meetings and dinner, the only free time I have for the gym is late in the evening.*

Why does this hurt my ability to get a good night's sleep? *Exercise stimulates the body, making me too alert to fall asleep early enough to get a full night's rest.*

What can I do to improve? *Rearrange my routine so I go to the gym after drama club and before dinner. Do homework after dinner, but stop within an hour or two of bedtime to relax and get ready for sleep.*

SLEEP ROADBLOCK: _____

Why do I have this roadblock?

Why does this hurt my ability to get a good night's sleep?

What can I do to improve?

Name: _____

By now you know how important sleep is for your well-being, but do you know all the facts about good sleep habits? Many myths still circulate about the best ways to fall asleep or stay awake. Can you separate the fact from the fiction? Can your family and friends?

PART ONE:

Decide whether the following statements are true or false. When you are finished, move onto Part Two of this exercise.

1. True or False: Drinking alcohol helps ensure a good night's sleep. _____
2. True or False: Caffeine won't affect your ability to fall asleep as long as you stop drinking it at least two hours before bedtime. _____
3. True or False: The ideal bedroom should be dark and quiet. _____
4. True or False: Turning on the air conditioner or rolling down the window will keep you alert while driving. _____
5. True or False: Caffeine starts making you alert as soon as you drink it. _____
6. True or False: Talking to a companion on a long road trip helps keep you alert. _____
7. True or False: You will always know when you are tired. _____
8. True or False: Seven hours of sleep is enough for teens to get really well-rested. _____
9. True or False: Drowsiness can result in the same level of impairment as being drunk. _____
10. True or False: Every year, drowsy driving results in 100,000 police-reported crashes. _____

This activity is continued on the next page.

Name: _____

PART TWO:

Check your responses against the answers provided below. How many statements did you score correctly?

1. False. Alcohol does make a drinker sleepy, but will also cause him to wake up more frequently during the night and wake up early in the morning, hurting his overall quality of sleep.
2. False. Caffeine can continue affecting the body hours after it is consumed. To make sure the ability to fall asleep is not harmed, avoid caffeine after 2 pm.
3. True. Darkness leads to the release of sleep-inducing chemicals in the brain. Noisy rooms are distracting.
4. False. An air conditioner or open window will increase your alertness temporarily.
5. False. It takes 30 minutes for two cups of coffee to take effect.
6. True. A companion on a long drive makes a trip safer by helping keep the driver alert.
7. False. Often, adrenaline can mask the effects of sleepiness. Additionally, the brain can shut down for 3-5 second “microsleeps” that you may not truly be aware of.
8. False. Studies have shown that teens need on average nine hours of sleep a night.
9. True. Studies have shown that sleep deprivation can result in an effect on driving comparable to a BAC level of .08, the legal limit in most states.
10. True. Additionally, the actual number of crashes may be even higher, as studies have revealed that only 50 percent of crashes are reported to the police.

PART THREE:

Now that you’ve tested your knowledge of sleep habits and drowsy driving, read the questions to five other people. Write down their answers on a separate sheet of paper. When your respondents have finished the survey, read them the correct answers.

PART FOUR:

Write a brief essay summarizing the sleep facts you think everyone should know. Your essay should identify any statements that two or more of your respondents answered incorrectly. Explain what you think is the most common myth about sleep and drowsy driving.

Name: _____

The amount of sleep you get each night makes a big difference when it comes to your daytime performance. Sleep deprivation—even an hour or two less than you need each night—has all kinds of negative consequences. You simply are not a capable driver when you haven't gotten the sleep you need.

Read the following three scenarios. For each one, write two different endings on a separate piece of paper. Use what you have learned in the video and from the *Sleep Deprivation* and *Drive Safely* fact sheets. What could happen to each driver if he or she doesn't get enough sleep? How would things be different if he or she is well-rested?

1. Ian is really excited to visit his brother Scott, who is a freshman at a college that is three hours away from home. He borrows his dad's car to drive up to campus after school on Friday. Ian and Scott have a great time. Scott takes his brother on a tour of the school, introduces him to his new friends, and takes him to parties both Friday and Saturday nights. Even though they go to bed really late each night, they have to wake up early to have time for all the activities they planned. When it comes time to leave on Sunday night, Ian can't stop yawning.

Ending 1: Ian decides he has to drive home so he can make it to school the next morning.

Ending 2: Ian decides he's too tired to drive home safely.

2. Sarah and her mother are planning a big trip to visit family in Florida, which is about nine hours away. They are planning to leave Saturday morning, and get there in the afternoon. Everything seems to be going well, and they leave as planned. However, about four hours into the drive, Sarah notices that her mom keeps rubbing her eyes and yawning. When Sarah asks her what's wrong, her mom confesses that she had to work very late last night and only got a few hours of sleep.

Ending 1: Sarah shrugs it off, and her mother keeps on driving, heading into their nine-hour car journey.

Ending 2: Sarah asks her mother if she thinks she should maybe take a nap, and her mother agrees. She pulls over, drinks some coffee and then naps for about 30 minutes.

This activity is continued on the next page.

Name: _____

3. Joey and his friend Tommy are driving to visit a friend who lives more than halfway across the country. They calculate they'll need to be on the road for at least 15 hours total. They plan their trip so they can stop for the night at another friend's house, and then finish their journey the next day. When they stay with their friend for the night, they end up eating lots of candy and staying up until very late at night and not getting much sleep. When Joey is getting ready to drive the next morning, Tommy notices he seems unfocused and exhausted. Tommy asks him if he's sure he can drive safely, but Joey just drinks two cups of coffee and says he's good to go.

Ending 1: Joey and Tommy get in the car, and intend to finish the rest of their journey today.

Ending 2: Tommy convinces Joey to take a 30 minute nap, to rest and wait for the caffeine to affect him.

Name: _____

Each year, 100,000 car accidents are caused each year by drowsy driving. Yet many people don't fully understand the danger of getting behind the wheel when they are sleepy. Here's your chance to educate your school or community by creating a public service campaign about the risks of drowsy driving. Consult the *Drive Safely* fact sheet to get started.

1. In small groups, brainstorm ideas for your campaign. Decide how you will communicate your message. Some ideas include:
 - a series of posters to put up in your school hallways
 - an ad for your school or local newspaper
 - a 30-second radio commercial to be broadcast over your school's PA system
 - a TV commercial to be played on your local TV station or in school classrooms

Remember, you are actually producing a campaign for others to see, so make sure your group has all the materials it needs for your method of choice. For example, don't choose a TV commercial if you don't have access to recording equipment.

2. Research drowsy driving at the library or on the Internet. What are the most interesting facts? What are the most important points to remember? How can people prevent drowsy driving crashes? As a group, decide which information you will focus on.
3. Get creative! How will you present your information? Remember, an effective public service campaign is both educational and memorable. Think about campaigns you have seen or heard before; ads about topics like drugs or smoking may inspire you.
4. Present your campaign. Make sure that people can see or hear your message. If you designed posters for the hallway, talk to your principal about where to display them. If you made a radio announcement or TV commercial, get permission from teachers and administrators to play them. If you created an ad for a local newspaper or TV station, contact the editor or employee who can help you get your message in print or on the air.
5. Share your campaign with the rest of the class, and then discuss each other's projects. Which were your favorite campaigns, and why?

Name: _____

By conducting controlled laboratory studies, scientists have discovered much about the way we sleep. They have also discovered that teens need 8½ to 9½ hours of sleep each night to be fully rested. But why is that? It turns out that there are five stages of sleep, and if the cycle is broken prematurely, it can lead to disorientation and drowsiness. A cycle typically last 90-110 minutes, and a sleeper will usually go through four to six complete cycles every night. Take a look at the *Stages of Sleep* fact sheet, and then try and match each of the characteristics below with the correct stage. The answers will be one of these choices:

- Stage 1
- Stage 2
- Stages 3 and 4
- Stage 5 (Rapid Eye Movement or REM Sleep)

1.	Deepest, most restorative sleep	
2.	Between being awake and falling asleep	
3.	A light sleep	
4.	Body immobile, muscles paralyzed	
5.	Brain waves begin to slow	
6.	Essential for energy and tissue repair	
7.	More and more time is spent in this stage as the night progresses	
8.	Body releases growth hormones	
9.	Dreams occur	
10.	Heart rate and body temperature begin to drop	

The Answer Key to this activity appears on the next page.

Name: _____

ANSWER KEY

1.	Deepest, most restorative sleep	Stages 3 and 4
2.	Between being awake and falling asleep	Stage 1
3.	A light sleep	Stage 2
4.	Body immobile, muscles paralyzed	Stage 5 (REM sleep)
5.	Brain waves begin to slow	Stage 1
6.	Essential for energy and tissue repair	Stages 3 and 4
7.	More and more time is spent in this stage as the night progresses	Stage 5 (REM sleep)
8.	Body releases growth hormones	Stages 3 and 4
9.	Dreams occur	Stage 5 (REM sleep)
10.	Heart rate and body temperature begin to drop	Stage 2

Name: _____

Now that you've learned how sleep is supposed to work, what happens when sleep doesn't work the way it's supposed to? Research has uncovered various sleep disorders such as narcolepsy, sleep apnea, restless legs syndrome and others. For this activity, work in groups of three. Have each member choose one of the sleep disorders below, and research and fill in the column for that disorder. Then, compare with the other group members to fill in the rest of the columns. If you have more than three group members, try looking up another sleep disorder and adding a column to the table.

	Narcolepsy	Sleep Apnea	Restless Legs Syndrome
Causes			
Symptoms			
Treatment			

Name: _____

In the video, you heard from several people whose lives were directly affected by drowsy driving. Carol McDonnell's daughter Maggie was killed by a drunk driver. Megan Siemers had a near death experience when she fell asleep at the wheel. Rusty Burris was paralyzed from the chest down when he crashed into a driveway embankment.

PART ONE:

Many people have suffered from the dangers of drowsy driving. What would you say to those who have been hurt? If you could have been there before the accident happened, what would you have said, knowing what would happen if they tried to drive home? How would you convince them not to drive?

What you would say to Rusty?

What you would say to the man who hit Maggie?

PART TWO:

Now it's time to come up with your own scenario. Get together in small groups, and come up with a scenario in which someone is at risk for drowsy driving. Develop the scenario, and write out a short script to perform for the class. Your script should include another character who successfully convinces the drowsy driver not to drive. Discuss the skit with the class after you perform. In what ways was your scenario realistic? In what ways was it not realistic? What could have happened if the drowsy driver had been allowed to drive?

FACT SHEETS

Name: _____

Over the span of the night, a sleeper typically moves through four to six cycles consisting of five different stages. Each cycle lasts about 90-110 minutes.

Stage 1:

The sleeper moves between consciousness and unconsciousness. Brain waves and muscle activity slows down.

Stage 2:

Light sleep. Brain waves become even slower, and heart rate and body temperature start to drop.

Stage 3:

Brain waves are very slow. Blood pressure and breathing continue to drop and muscles are relaxed. This stage is essential for generating energy for the next day. Tissue repair occurs in this stage and the body releases growth hormones.

Stage 4:

Deepest sleep; it's very difficult to wake someone in this stage. Muscles are still relaxed. This stage is also essential for energy; tissue repair and the release of growth hormones continue to occur.

Stage 5:

Rapid eye movement, or REM sleep. In this stage, brain waves are intense and active. Dreams occur in this stage. Muscles are paralyzed, preventing a sleeper from acting out her dreams. As the night progresses, a larger and larger part of each sleep cycle is spent in REM sleep.

Your body needs sleep. You may think that you can get used to fewer than the nine hours you need each night, but even an hour or two less than that has serious consequences. Check out all the problems you face when you're sleep-deprived:

Learning

The brain needs a good night's sleep to perform well the next day. If you don't get enough of it, you'll experience:

- a reduced ability to pay attention
- a decrease in verbal creativity and communication
- impaired abstract thinking
- difficulties solving problems and thinking innovatively
- trouble making decisions involving unexpected events
- a decrease in overall motivation
- impaired memory. Sleep is crucial to organizing that new information and strengthening memory—when some people were tested the day after learning a new task, the ones who got a good night's sleep performed better than the ones who didn't.

Athletic Performance

The body is also affected when you're sleep-deprived. Consequences include:

- impaired coordination, blurred vision, and slower reaction times
- reduced cardiovascular performance—by up to 11 percent
- diminished mental functioning
- reduced endurance and increased feelings of exertion

Health

Lack of sleep is more than uncomfortable or inconvenient—it's downright unhealthy. Risks of sleep deprivation include:

- becoming more acne-prone
- impaired immune system, making you more likely to get sick
- hormone imbalances that make obesity more likely

Mood

It's simple: you just don't feel good when you're tired. Without enough sleep, you'll be:

- more aggressive
- irritable and easily angered
- at increased risk for depression

Certain behaviors or activities make it very difficult to get the sleep you need each night. If you have trouble falling asleep, try to remove these roadblocks from your life.

Too much caffeine

The caffeine in coffee and soda blocks the adenosine receptors in the brain, preventing the sleep-inducing chemical from doing its job. Caffeine can affect your ability to fall asleep for hours after drinking it.

Long naps

Naps too close to bedtime deplete the sleep-inducing chemicals in the brain, making it harder to fall asleep when you really need to.

Erratic schedule

The body works best when it has a regular schedule, which means going to bed and waking up at about the same time every day, including weekends. Staying up more than an hour later and waking up more than two or three hours later on the weekends than you normally do disrupts that schedule, making it difficult to get back into your weekday pattern when Sunday night rolls around.

Distracting bedroom

The perfect sleep environment is a comfortable temperature, dark, quiet, and free from distractions like TV, a computer or a cell phone. If your bedroom is too hot or cold, bright, noisy or distracting, you may have trouble sleeping.

Stimulating activities at night

Doing homework, reading complex books, or exercising too close to bedtime revs up your system and makes you too alert to fall asleep easily. Instead, give yourself at least an hour before you fall asleep to do relaxing activities, like taking a bath or listening to quiet music.

Untreated sleep disorders

You may have a condition that hurts your ability to sleep, such as sleep apnea, snoring, nightmares, periodic limb movement disorder, or restless legs syndrome. Finding a doctor and getting treatment can improve your sleep.

Name: _____

In the video you learned how important it is to get between 8½ and 9½ hours of sleep each night—so how can you make sure to do it? Follow these tips for a quiet, restful night.

1. Be smart about naps. Naps are a great way to restore alertness, but be careful not to nap too close to your bedtime. Napping too late in the afternoon makes it harder to fall asleep at night. Aim for a nap of only 20-30 minutes—otherwise, you may wake up groggy and disoriented.
2. Avoid caffeine and nicotine. Both are stimulants, so you should stop consuming them in the early afternoon.
3. Avoid alcohol. Although it can temporarily help you fall asleep, it also causes you to wake up often during the night and wake up earlier in the morning, so your overall sleep quality will suffer.
4. Exercise at least five hours before bedtime. If you exercise within a few hours of bedtime, your body will be too stimulated to fall asleep.
5. Stick to a regular schedule. This can be hard for teens who want to stay up late and sleep in on the weekends, but drastic changes in your routine make it much harder to fall asleep on the weekdays. Try not to go to bed more than an hour later than you normally do, and don't sleep in more than three hours later. Don't go off your regular sleep schedule for more than two nights in a row if you can help it.
6. Do something relaxing for an hour or two before bedtime. Don't do homework or watch TV—instead, take a bath, listen to calm music, or read something light.
7. Stress increases alertness and stimulates the release of cortisol, which should be at its lowest levels when you're trying to sleep. Jot down things that worry you before bed and forget about them for the night—you can deal with them in the morning.
8. Make your bedroom a good sleeping environment. Make sure it is dark, quiet, and a comfortable temperature—use curtains or earplugs if you need them. Don't use your bedroom for stressful or intense activities, so that you associate the room only with calm and sleep.

Name: _____

In the video, you met one man whose drowsy driving ended in tragedy when he was a teen. He's certainly not alone—thousands of accidents occur each year because of a driver falling asleep at the wheel. Young people have a much higher risk of causing an accident than adults. Did you know:

- 100,000 car accidents happen each year are caused by falling asleep at the wheel.
- 55 percent of drowsy driving crashes are caused by drivers 25 and under.
- Being awake for 18 hours is equivalent to having a blood alcohol content of 0.08 percent—which is legally drunk in most states.
- The highest-risk groups for drowsy driving crashes are males ages 25 and under, night shift workers or people who work long hours, commercial drivers, business travelers and people with undiagnosed sleep disorders.

Make sure you reach your destination safely by following these guidelines.

- Most importantly—get a good night's sleep before a big trip!
- Bring a friend along to share the driving duties and talk to you when you're behind the wheel.
- Stop regularly—every two hours or every 100 miles.
- Stay away from alcohol—its effects are multiplied when you are tired. The same goes for medications that make you drowsy.
- Watch yourself for danger signs: difficulty focusing, trouble remembering the last few miles, yawning, nodding, rubbing your eyes, missing exits or traffic signs, drifting out of your lane, or hitting the shoulder.
- If you find yourself too tired to go on, pull over in a safe place for a 20-minute nap. Drinking caffeine before you go to sleep will help; it takes about 30 minutes for caffeine to take effect, so you will be more alert by the time you wake up.
- Turning the air conditioner on, rolling down the window, or playing the radio will NOT help you stay awake!

Name: _____

For more information, visit these websites.

“Brain Basics: Understanding Sleep.” National Institute of Neurological Disorders and Stroke, National Institutes of Health.

http://www.ninds.nih.gov/disorders/brain_basics/understanding_sleep.htm

Read up on sleep research, sleep and health, and lots more.

The National Road Safety Foundation, Inc

www.nationalroadsafety.org

This website provides useful information about preventing drowsy driving accidents, plus general safety tips for teen drivers.

The National Sleep Foundation

www.sleepfoundation.org

This site offers a wealth of information on all sleep-related topics. Check out the Doze Family animated tutorial, polls, quizzes, sleep shop, and special section on teens and sleep.

“Sleep, Sleep Disorders, and Biological Rhythms.” NIH Curriculum Supplement Series, National Institutes of Health

<http://science.education.nih.gov/supplements/nih3/sleep/default.htm>

Explore what happens in the brain and body during sleep. Try sleep-related student activities.

TeensHealth

www.kidshealth.org/teen/

Find out answers to questions like, “How much sleep do I need?” and read up on sleep disorders.

Name: _____

“Common Sleep Problems.” TeensHealth, The Nemours Foundation.
www.teenhealth.org/teen/your_body/take_care/sleep.html

“Drowsy Driving.” The National Road Safety Foundation.
www.nationalroadsafety.org/quicksafety/drowsy.html

“How Much Sleep Do I Need?” TeensHealth, The Nemours Foundation.
www.teenhealth.org/teen/your_body/take_care/how_much_sleep.html

“Interview: Carlyle Smith.” *Inside the Teenage Brain*. Frontline.
<http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/interviews/smith.html>

“Interview: Mary Carskadon.” *Inside the Teenage Brain*. Frontline.
www.pbs.org/wgbh/pages/frontline/shows/teenbrain/interviews/carskadon.html

National Sleep Foundation, www.sleepfoundation.org

“Sleep, Sleep Disorders, and Biological Rhythms.” NIH Curriculum Supplement Series,
National Institutes of Health.
<http://science.education.nih.gov/supplements/nih3/sleep/default.htm>

Spinks, Sarah. “Adolescents and Sleep.” *Inside the Teenage Brain*. Frontline.
<http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/from/sleep.html>

Name: _____

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OTHER PROGRAMS

OTHER PROGRAMS
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<i>From A to ZZZs: What Teens Need to Know About Sleep</i>	video/print or DVD/print
<i>Food, Health and Exercise: Putting It All Together</i>	video/print or DVD/print
<i>Ten Reasons to Get and Stay in Shape</i>	video/print or DVD/print
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<i>Overweight in America: Why Are We Getting So Fat?</i>	video/print or DVD/print
<i>Addiction and the Human Brain</i>	video/print or DVD/print
<i>The Five Life Strategies of Successful Teens</i>	video/print or DVD/print
<i>Stressed Out: Stress Management 101</i>	video/print or DVD/print
<i>Understanding Eating Disorders</i>	video/print or DVD/print

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