

# 6. Consciousness

## Objectives

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- Define consciousness and some of the types of conscious experience
- Summarize early ideas about consciousness
- Name and describe the different levels and states of consciousness
- Explain the sleep and dream states and how they affect one's health
- Describe hypnosis, its qualities, and its possible benefits

## Vocabulary

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altered states of consciousness	circadian rhythm	nonconscious	rapid eye movement (REM)
biological clock	consciousness	posthypnotic suggestion	subconscious
chronobiology	entrainment	preconscious	unconscious
	hypnosis		

## Background

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In this chapter, students explore the complex topic of consciousness. The chapter begins by defining consciousness as “awareness of one’s self and one’s environment.” It then surveys the different types of conscious experience and reviews early ideas about consciousness.

To many students, consciousness may mean simply being awake. But they discover that there actually are three main levels of consciousness—normal or waking consciousness, the subconscious, and the unconscious. Information about how these levels work and interact may help shed light on questions that students have about how their minds work and why they act as they do.

Students will be interested in the chapter’s summary of altered states of consciousness, including daydreaming, drug-induced states, hallucination, meditative states, states induced by biofeedback, and lucid dreaming states. The chapter defines each of these, surveys its effects and uses, and explores related issues. Students will want to discuss this material.

The chapter’s discussion of consciousness and chronobiology introduces students to effects of time

on life processes, a study that helps them understand the effects of shift work, jet lag, and other common problems. This examination includes discussion of circadian rhythms, biological clocks, and entrainment.

As this chapter reveals, high school students need 9.5 hours of sleep per night but often are chronically sleep-deprived. As they come to understand why this occurs and the functions and value of sleep and dreaming, they may find ways to improve their physical health.

Sleep and dreaming are essential to the survival of all humans but are not well understood. Students survey three theories about why we sleep, the stages of sleep and brain waves, and symptoms of common sleep disorders. They then learn about dreaming, hypnosis, and current theories of consciousness.

### Further Resources

Faraday, Ann. *The Dream Game*. New York: Harper & Row, 1974.

Statt, David. *Dictionary of Psychology*. New York: HarperCollins, 1982.

## For Discussion

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### Review

1. Define consciousness.
2. Name the six altered states of consciousness.
3. What are the three theories about why we sleep?
4. How do scientists explain why we dream?

### Critical Thinking

1. What did Descartes conclude about consciousness? How does this view relate to current theories on consciousness?
2. Why do you think that it's important to understand the levels of human consciousness?
3. What examples other than shift work and jet lag can you give of things or events that could alter your circadian rhythm?
4. Why do scientists study the electrical activity of the brain to understand sleep?
5. Do you think that you would ever try hypnosis? Why or why not?

## Activities

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### 1. Conscious Experiences Journal

Ask students to track their conscious experiences—external sensory perceptions, internal sensory perceptions, abstract awareness, and awareness of self—for a designated period of time, recording their observations in a journal. Discuss the results in class.

### 2. Relax!

Ask students to meditate for a short time either inside or outside of class. Ask students to measure their heart rates before and after meditating, recording any changes. Encourage them to try meditating at highly stressful times and to report any changes that they feel after meditating.

### 3. Internet: Dreams and Dream Interpretation

Assign students to use the Internet to find information on dreams and dream interpretation. Encourage them to look for university- and hospital-based research as well as personal sites devoted to dreams.

### 4. Special Sources: Hypnotism

Ask students to use newspapers, books, and magazines to learn about people who have been hypnotized to quit smoking or to manage pain. Ask them to report on their results.

Name \_\_\_\_\_

## 6. Consciousness

As you read Chapter 6, write an answer to each question below.

1. On what do scientists agree about how consciousness occurs? On what do they disagree?

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2. How do the ideas René Descartes compare with those of William James and John Watson?

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3. How do daydreaming and lucid dreaming differ?

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4. What is the difference between chronobiology and circadian rhythms?

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5. How have researchers determined that there are four NREM stages of sleep and one REM stage of sleep?

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Name \_\_\_\_\_

## 6. Consciousness

Find the best answer for each item. Then circle that answer.

1. Which term means "a state other than normal waking consciousness"?
  - a. altered state of consciousness
  - b. circadian rhythm
  - c. chronobiology
  - d. entrainment
2. What is a "biological clock"?
  - a. a mechanism in the brain that monitors feelings
  - b. an instinctive awareness of what time it is
  - c. a structure within the brain that programs activities in the body to occur at different times during a daily cycle
  - d. a part of the brain that regulates your thoughts
3. What does the term "chronobiology" mean?
  - a. a biological chronology of events guiding your consciousness
  - b. the brain's monitoring of biological events
  - c. study of the effects of time on life processes
  - d. study of the effects of biology and chronology on the conscious mind
4. What is "circadian rhythm"?
  - a. a 15-hour cycle of brain waves that help with sleep
  - b. a cycle that occurs in roughly a 25-hour period
  - c. an animal's natural instinct to sleep
  - d. a natural cycle that has no time limitation.
5. Which term means "awareness of oneself and one's environment"?
  - a. consciousness
  - b. subconscious
  - c. biological clock
  - d. preconscious
6. What is entrainment?
  - a. inability to sleep
  - b. training your body to sleep
  - c. a pattern of sleep that is interrupted
  - d. alteration of a natural cycle to fit a different rhythm
7. What is hypnosis?
  - a. a cycle that occurs in a 25-hour period
  - b. a process wherein a person enters a trancelike state characterized by heightened suggestibility
  - c. a drug-induced state
  - d. a type of medication
8. What is the meaning of the term "preconscious"?
  - a. any state felt prior to a normal waking state
  - b. knowledge and memories that are present in the mind but are not being accessed
  - c. a part of the unconscious mind
  - d. intuitive knowledge of an upcoming event
9. What does the term "unconscious" mean?
  - a. the study of the effects of time on life processes
  - b. awareness of one's self and one's environment
  - c. sum of wishes, memories, motives, or drives that influence behavior but are not consciously perceived
  - d. a brain structure that monitors sleep
10. Which of the following is below the level of waking consciousness?
  - a. imagery
  - b. core consciousness
  - c. extended consciousness
  - d. subconscious

Name \_\_\_\_\_

## 6. Consciousness

Read each description, and write the letter of the correct term on the line.

1. The two states of consciousness that are vital to one's health are \_\_\_\_\_.
  - a. meditation and daydreaming
  - b. core consciousness and extended consciousness
  - c. sleeping and dreaming
  - d. sleeping and normal consciousness
2. Consciousness is \_\_\_\_\_.
  - a. a single experience
  - b. a highly complex phenomenon
  - c. an external experience
  - d. an awakening
3. External sensory perception involves \_\_\_\_\_.
  - a. awareness of oneself
  - b. awareness of sights, sounds, tastes, smell, and touch sensations in the environment
  - c. awareness of abstract ideas
  - d. memories and imagined events
4. Normal or waking consciousness is \_\_\_\_\_.
  - a. whatever we are aware of in the present
  - b. the site of our suppressed desires, conflicts, and memories
  - c. the thoughts that we process automatically
  - d. fanciful imagery or unfocused thoughts
5. The experience of sights and sounds that do not occur is \_\_\_\_\_.
  - a. lucid dreaming
  - b. circadian rhythm
  - c. jet lag
  - d. hallucination
6. One way to reduce pain and tension by altering brain waves is \_\_\_\_\_.
  - a. meditation
  - b. jet lag
  - c. sleep apnea
  - d. narcolepsy
7. A person who is an "early bird" or a "night owl" is considered to have a preferred \_\_\_\_\_.
  - a. circadian rhythm
  - b. biological clock
  - c. entrainment
  - d. chronobiology
8. The time it takes to move through the five stages of sleep is about \_\_\_\_\_.
  - a. 65 minutes
  - b. 90 minutes
  - c. 110 minutes
  - d. 2 hours
9. The waves that the brain produces when we are awake are called \_\_\_\_\_.
  - a. alpha waves
  - b. mega waves
  - c. beta waves
  - d. neuron waves
10. A person with hypersomnia experiences \_\_\_\_\_.
  - a. chronic, excessive sleeping and irresistible drowsiness and napping during the day
  - b. feelings of terror during the night
  - c. a sudden loss of muscle control
  - d. sudden and regular breathing stoppages during sleep

### Essay Question

Define and compare at least five types of sleep disorders. Have you experienced any of these?