

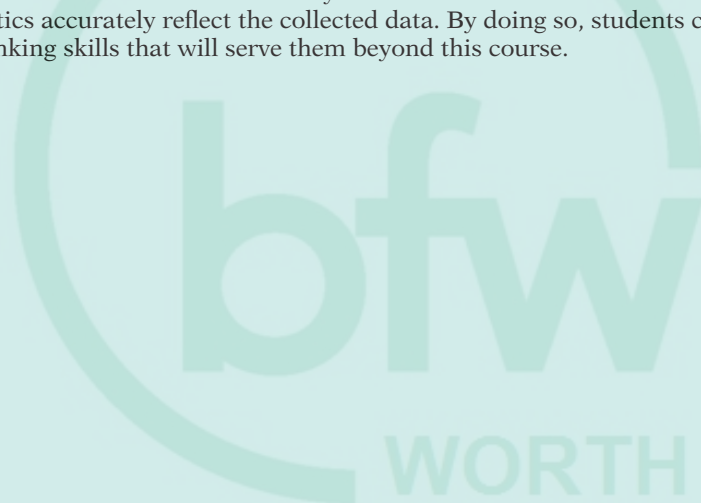
DOMAIN 1: Scientific Inquiry

BACKGROUND/SIGNIFICANCE

The authors of the *National Standards for High School Psychology Curricula* placed the Scientific Inquiry Domain at the forefront to emphasize the need to help students understand the scientific nature of psychology. It is suggested that concepts in this domain be taught at the beginning of the course and reemphasized throughout. Teaching these concepts early illustrates the connectedness of all the modules and stresses the central point that psychology is based on research.

Module 1 introduces students to this diverse and rapidly changing field. Many high school students consider a career in psychology, but few know of the wide variety of options available to them. Even fewer appreciate the growth psychology has experienced as it has evolved as a science. Students gain a clearer understanding of the six contemporary psychological perspectives by understanding their roots. By emphasizing these perspectives, you build a framework for discussing the many concepts presented throughout this course. Descriptions of the many subfields in psychology and information about the different settings in which psychologists work appear in Appendix A.

Modules 2 and 3 present a wonderful opportunity to introduce students to the basic methods psychologists use to answer questions about behavior and mental processes. Many psychology teachers hope that students will leave their classes as better consumers of information. The media bombard students with research findings and statistics, and most are ill equipped to think critically about the sources of such data. Use Module 2 to discuss the various research strategies and emphasize what constitutes good research. Use Module 3 to provide students with the tools necessary to understand how statistics are derived and whether such statistics accurately reflect the collected data. By doing so, students can develop vital critical thinking skills that will serve them beyond this course.



TEACHING WITH THE STANDARDS

Thinking About Psychological Science

Standard Area: Perspectives in Psychological Science

MODULE 1: History and Perspectives in Psychological Science

Standard 1: Development of psychology as an empirical science

Standard 2: Major subfields within psychology

This module introduces students to the science of psychology, from its early days to today. Students will learn about the first psychology laboratory founded by Wilhelm Wundt and how his students brought psychology to the United States. Students will appreciate how diversity has affected psychology's growth as a science. In addition, students will learn how different perspectives in psychology were begun and evolved into today's more eclectic approaches.

Standard Area: Research Methods, Measurement, and Statistics

MODULE 2: Research Strategies

Standard 1: Research methods and measurements to study behavior and mental processes

Standard 2: Ethical issues in research with human and non-human animals

Appreciating psychology's role as a scientific discipline is key to applying its theories and approaches to everyday life. In this module, students will learn about the importance of research and the different ways in which psychologists study behavior and mental processes. Students will also examine the importance of research ethics in dealing with both human and non-human animals.

MODULE 3: Psychology's Statistics

Standard 3: Basic concepts of data analysis

This module highlights the crucial role statistics plays in psychology. Research studies generate tons of data, and statistics provides the means for interpreting the data in meaningful ways. Students will learn about the qualities of the normal distribution. Students will also discover the usefulness of comparative statistics and how to interpret the differences in the data generated among groups of research participants.



DOMAIN 1

INTRODUCE THE DOMAIN

Enduring Question

How does the science of psychology inform the understanding of behavior and mental processes?

Domain Objectives and Essential Questions

Thinking About Psychological Science

MODULE 1

Essential Question: *How have different perspectives influenced the development of psychology as a science?*

Objectives

- Define psychology and describe its scientific nature.
- Trace the historical development of psychology, including contributions from researchers of diverse backgrounds.
- Compare psychology in the nineteenth, twentieth, and twenty-first centuries.
- Describe how influential figures in psychology, including those from diverse ethnicities and genders, advanced the field.
- Briefly describe the different perspectives from which psychologists examine behavior and mental processes, while understanding that each perspective provides a significant contribution to psychology.
- Describe the basic ideas behind three of psychology's developing areas.



WORTH

DOMAIN 1

DOMAIN 1

Scientific Inquiry

● Thinking About Psychological Science

MODULE 1 History and Perspectives in Psychological Science

MODULE 2 Research Strategies

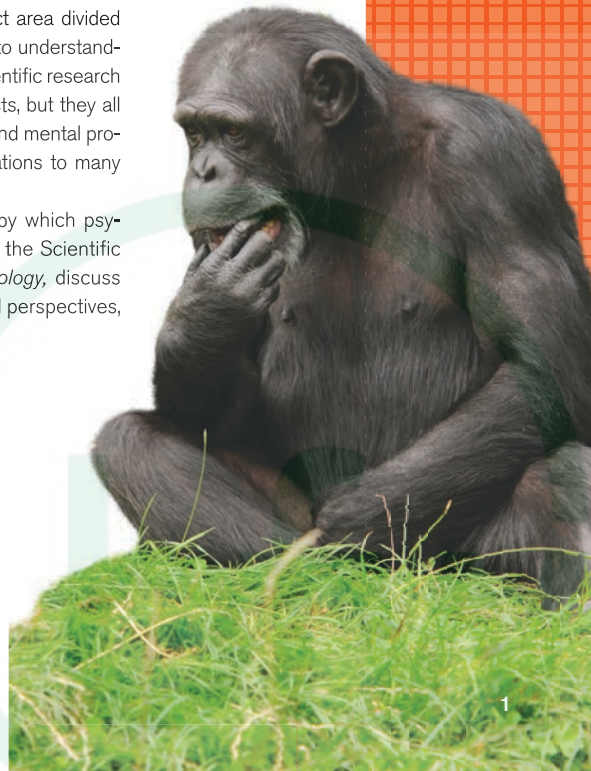
MODULE 3 Psychology's Statistics



We have divided the science of psychology into seven domains: (1) Scientific Inquiry, (2) Biopsychology, (3) Development and Learning, (4) Sociocultural, (5) Cognition, (6) Individual Variations, and (7) Applications of Psychological Science. Each broad domain covers at least one subject area, which is then broken into individual modules to examine specific topics in greater detail.

The first domain, Scientific Inquiry, has one subject area divided into three modules. These three modules are central to understanding the science of psychology and its emphasis on scientific research methods. You see, psychologists differ in their interests, but they all use the same research methods to explore behavior and mental processes. All modules, from 1 through 36, contain citations to many different studies, all of which used scientific research.

In addition to identifying the research methods by which psychologists examine behavior and mental processes, the Scientific Inquiry Domain contains modules that define *psychology*, discuss the history of psychology and different psychological perspectives, and examine how psychologists use statistics.



MODULE 2

Essential Question: *How does scientific inquiry improve our understanding of psychology?*

Objectives

- Appreciate how scientific inquiry improves the knowledge and practice of psychology.
- Discuss the ways in which bias can influence research.
- Compare and contrast the research methodologies that psychologists use to study human behavior.
- Explain why survey data should be interpreted with caution.
- Explain the value of conducting longitudinal and cross-sectional research.
- Describe the design of an experiment and explain why experiments are powerful research designs.
- Understand the ethical issues surrounding human and animal research and why these issues are important to psychologists.

MODULE 3

Essential Question: *How can an understanding of statistics improve our understanding of the science of psychology?*

Objectives

- Explain the usefulness of frequency distributions.
- Define measures of central tendency and variation and how these relate to the normal distribution.
- Differentiate between percentage and percentile rank.
- Discuss how correlation coefficients describe relationships between variables.
- Understand the meaning and importance of statistical significance.

History and Perspectives in Psychological Science

LESSON PLANNING CALENDAR

Use this Lesson Planning Calendar to determine how much time to allot for each topic.

Schedule	Day One	Day Two	Day Three
Traditional Period (50 minutes)	The Definition of Psychology	Modern Psychology's Roots Psychology in the Twentieth Century Psychology's American Groundbreakers	Six Psychological Perspectives Psychology in the Twenty-First Century
Block Schedule (90 minutes)	The Definition of Psychology Modern Psychology's Roots	Psychology in the Twentieth Century Psychology's American Groundbreakers Six Psychological Perspectives Psychology in the Twenty-First Century	



ACTIVITY PLANNER FROM THE TEACHER'S RESOURCE MATERIALS

Use this Activity Planner to bring active learning to your daily lessons.

Topic	Activities
The Definition of Psychology	<p>Getting Started: Critical Thinking Activity: Fact or Falsehood? (20 min.)</p> <p>Critical Thinking Activity: Psychology as Science (PAS) Scale (15 min.)</p> <p>Digital Connection: Technology Application Activity: How Can Psychology Help Me? (20 min.)</p> <p>Digital Connection: <i>Discovering Psychology</i>: "Past, Present, and Promise" (30 min.)</p> <p>Building Vocabulary: Crossword Puzzle (15 min.)</p> <p>Building Vocabulary: Matching (15 min.)</p>
Modern Psychology's Roots	<p>Cross-Curricular Activity: Read All About It! Wundt Opens a Psychology Lab: A Newspaper Assignment for the History of Psychology (30 min.)</p>
Psychology in the Twentieth Century	<p>Digital Connection: DVD: <i>Freud: The Hidden Nature of Man</i> (29 min.)</p> <p>Digital Connection: <i>B. F. Skinner: A Fresh Appraisal</i> (40 min.)</p> <p>Digital Connection: Technology Application Activity: What Happened on Your Birthday? (20 min.)</p>
Psychology's American Groundbreakers	<p>Graphic Organizer: Famous Names in Psychology (15 min.)</p> <p>Cooperative Learning Activity: Diversity in Textbooks (30 min.)</p>
Six Psychological Perspectives	<p>Cooperative Learning Activity: What Perspective Is Dominant in Scientific Psychology? (20 min.)</p>
Psychology in the Twenty-First Century	<p>Application Activity: A Beautiful Day (20 min.)</p> <p>Critical Thinking Activity: The Science/Art Continuum: Where Does Psychology Fit? (15 min.)</p>



Thinking About Psychological Science

MODULES

- 1 History and Perspectives in Psychological Science
- 2 Research Strategies
- 3 Psychology's Statistics

Consider these news headlines: "Local Water Pollution Levels Rise"; "International Conflict Continues, More Violence Predicted"; "Energy Conservation a Concern as Winter Approaches"; and "More Single Parents as Divorce Rate Increases." Do you notice any threads tying these headlines together? First, each of them focuses on some sort of problem. Second, and more interesting from a psychological perspective, all these problems involve behaviors (disposing pollutants into water supplies, fighting among countries at war, turning lights off to save energy, and divorcing a spouse), which means their solutions will include the work of those who study behavior for a living: psychologists.

Psychology's success in helping solve these and other problems will partly depend on whether you, your friends, and your family understand some of psychology's fundamental approaches and findings. For example, we all should know that behavior has multiple causes and that psychologists have different perspectives. Knowledge of psychological methods and practices makes positive behavioral change more likely.

The three modules in the Scientific Inquiry Domain help lay the foundation for understanding psychology. Module 1 looks at the definition of psychology, its history, and the different perspectives that psychologists take to understand the mind and behavior. Module 2 introduces research strategies by exploring why research is important, the advantages and disadvantages of various research strategies, and how to design an experiment. Module 3, on psychology's statistics, covers concepts such as how to arrange data, various ways to measure data, and different strategies to find meaning in data.

MODULE 1

History and Perspectives in Psychological Science



This psychogram would never be used by today's psychologists, but it illustrates psychology's interesting history.

The Definition of Psychology

Modern Psychology's Roots

- Wilhelm Wundt and the Beginning of Psychology as a Science
- Edward B. Titchener and Structuralism
- Gestalt Psychology
- William James and Functionalism

Psychology in the Twentieth Century

- Sigmund Freud and Psychoanalysis
- Ivan Pavlov, John Watson, and Behaviorism
- Abraham Maslow, Carl Rogers, and Humanistic Psychology
- Jean Piaget and Child Development

Psychology's American Groundbreakers

Six Psychological Perspectives

Psychology in the Twenty-First Century

An unusually large group of students collects in the hallway during the 5-minute break between class periods. Some stand on tiptoe, craning their necks from side to side, attempting to gain better views of the two students shouting at each other 10 feet from my classroom door. The tardy bell does little to disperse them.

The crowd swells in number, making it nearly impossible to identify who is at the center of this argument. An assistant principal intervenes, and the escalating shouting match ends as quickly as it started. Both students are escorted to the office to sort out their differences.

Fortunately, these disruptions are rare where I teach, but talk of the dispute, which started as a vote on homecoming themes in a student council meeting, buzzes from desk to desk. So, we begin class by discussing some questions that psychologists might pose about the incident we just witnessed:

- Are some of us born more aggressive than others?
- How are levels of aggression affected by what we learn from our parents, peers, and cultural groups?

INTRODUCE THE MODULE

Getting Started **TRM**

Before students begin reading, have them write down the first five words that come to mind when they hear the word *psychology*. Suggest that they look at this list from time to time during the course to compare these initial responses with concepts they will learn reading this module.

The following activities will help identify misconceptions about psychology and guide students toward an understanding of psychology as a science: **Critical Thinking Activity: Fact or Falsehood?** and **Critical Thinking Activity: Psychology as Science (PAS) Scale**.

TEACHING TIP **TRM**

Have students brainstorm about “buzz-worthy” incidents that have happened lately among their friends. Engage them in generating empirical questions about those incidents like Randy has done with the homecoming theme scenario he presents here. This will help students see how questioning spurs the scientific process forward.

At this point, you may want to use **Technology Application Activity: How Can Psychology Help Me?**

DIGITAL CONNECTION

The companion website to this book contains teacher resources for class presentations and review and assessment concepts and terms. Log on at www.highschool.bfwpub.com/thinkingaboutpsychology3e.

Resource Manager

Activities	TE	Web/Multimedia	TE	Film/Video	TE
Application	17	Digital Connection	3, 5, 11	<i>Discovering Psychology: "Past, Present, and Promise"</i>	4
Cooperative Learning	12, 14	Technology Application	3, 11	<i>Freud: The Hidden Nature of Man</i>	9
Critical Thinking	3, 18			<i>B. F. Skinner: A Fresh Appraisal</i>	10
Cross-Curricular	6				
Graphic Organizer	12				
Vocabulary	4				

TEACH

Beyond the Classroom

Bellringers Use the following prompts as discussion starters:

- Describe what you think a psychologist does.
- How do psychologists affect your life?
- How are science and intuition different from one another?
- What are some psychological questions you always wanted to know the answers to?

ACTIVE LEARNING

Have students conduct a naturalistic observation of a classmate or a non-human animal and record all the different behaviors that are observed. Discuss with students the complexity of behaviors psychologists must take into account.

Differentiation TRM

The film *Discovering Psychology: "Past, Present and Promise"* provides a strong introduction to the field of psychology, with historical backgrounds of key figures and the directions taken by current research.

TEACHING TIP TRM

Use **Building Vocabulary: Matching** and **Building Vocabulary: Crossword Puzzle** to help students learn the concepts presented in this module. These activities will help students become more familiar with the concepts as you discuss them in class.

- What are the biological influences on aggression?
- What motivates some people to settle their differences physically and others to talk them out?
- Are young adults more likely than middle-aged adults to take part in physical confrontations?
- How could this situation have been avoided or defused?
- Why were students more likely to watch this conflict (and be late to class) than to break it up?
- Why do some groups or committees get along better than others? (See Thinking About Positive Psychology: Getting Along—The Math Behind Groups That Thrive.)

This psychology course will help you answer these and many other interesting questions.

Thinking About

POSITIVE PSYCHOLOGY

Getting Along—The Math Behind Groups That Thrive

One day, if you haven't already, you'll be a part of a committee or group that meets regularly in your high school, the college you attend, or your community. Whether a student council, a church youth group, or the Spanish club, group members must get along to agree on and accomplish goals.

Psychologists have asked, "What helps groups get along and thrive?" It turns out that there is an emotional recipe for cooking up healthy group outcomes. The number of positive emotions experienced during meetings (compared to negative emotions) has a big impact on a group's flourishing and productivity (Fredrickson & Losada, 2005). Using scientific methods and mathematics, the positivity-negativity ratio should at least be 3 to 1, and perhaps as high as 11 to 1.

This is not to say that there should be no debate on topics that need resolving. However, research shows that boards and committees with positivity-negativity ratios below 3 to 1 often have a "toxic atmosphere," and productivity from such group members is rare (Fredrickson et al., 2005).

So, let's say you want to pump up the positivity-negativity ratio during your next yearbook staff gathering or student council meeting. What should you do? Research suggests that you should

- promote undivided focus as each group member speaks. (Outlaw texting during meetings!)
- express appropriate support, encouragement, or appreciation during and after a group member's presentation.
- ask questions that explore a speaker's viewpoint instead of making statements like "That will never work."
- minimize sarcastic and cynical comments.
- discourage nonverbal behaviors (for example, eye rolling and smirking) during meetings.

Hopefully, the positive-negative ratio idea will spill over into other aspects of your life. Interestingly enough, unsuccessful business teams, feelings of depression, and failing marriages are also characterized by very low ratios of positive to negative emotions (Vaughn & Fredrickson, 2006).

ACTIVE LEARNING

Critical Thinking: Psychology as Science

This activity is best done on the first day of class or before students have read Module 1. Ask students to write five adjectives that describe "scientist" and five adjectives that describe "psychologist." Then have students present their lists to the class.

This exercise awakens students to psychology as the science of behavior and mental processes. Students generally perceive "psychologist" and "scientist" differently. They may describe psychologists as *accepting*, *caring*, *genuine*, or *attentive* but describe scientists as *methodical*, *analytical*, *intelligent*, or *thorough*.

Source: Smith, G. F. (1982). Introducing psychology majors to clinical bias through the adjective generation technique. *Teaching of Psychology*, 9(4), 238–239.

The Definition of Psychology

WHAT'S THE POINT?

1-1 What is psychology, and what kinds of topics do psychologists study?

Psychology is the scientific study of behavior and mental processes. Before going any further, let's make sure we understand the three parts of this definition: scientific study, behavior, and mental processes.

When we say that psychology is a *scientific study*, we mean that psychologists rely on scientific research methods in their attempts to unravel answers to questions such as “Why do some people offer help when others do not?” Psychologists systematically collect research data and use mathematical formulas to analyze the results. Scientific research methods are an essential key to unlocking psychology's secrets.

The last two parts of our definition, *behavior* and *mental processes*, establish the incredibly broad range of interesting topics that psychologists study. Any directly observable thing you do, from laughing to turning the pages of this book, is a behavior that psychologists could study. But psychologists also study the things we cannot observe directly—our mental processes, which include all our thoughts, feelings, and dreams.

Are some people simply born more aggressive than others? To find out, psychologists might study children in a day care by watching for aggressive behaviors at early ages. Psychologists might also study the parts of the brain that are active during aggressive behavior to try to determine what chemicals affect this region of the brain. Psychologists who are less biologically inclined might examine a person's home life in search of the origins of aggressive acts. Interestingly, psychologists also study people who witness aggressive behavior, trying to understand why some people offer help and try to stop the aggression while others are apathetic and do not.

Psychologists who do research on such topics do so with different goals in mind. Some conduct **basic research**, which is research done to increase the scientific knowledge base of psychology. Others conduct **applied research**, which is research intended to solve practical problems. Basic research on aggressive behavior might aim to find out more about the biological influences on aggression. Applied research on helping behaviors might aim to reduce apathy in bystanders who witness aggressive behavior.

psychology Scientific study of behavior and mental processes.

basic research Pure science that aims to increase the scientific knowledge base.

applied research Scientific study that aims to solve practical problems.

TEACHING TIP

Point out that the definition of psychology includes both human and non-human animals. Psychology is not just concerned with human behavior but also with the behavior of all animals.

DIGITAL CONNECTION

Two major professional psychology organizations fund research, publish journals, and establish ethical and practical guidelines for professionals to follow:

- The **American Psychological Association (APA)** was founded in 1892. It is the primary publisher of scholarly journals in the field and promotes research and practice through funding initiatives and conferences (www.apa.org).
- The **Association for Psychological Science (APS)** was founded in 1988 to promote the development of scientific psychology. APS strictly promotes research, application, and teaching of scientific psychology (www.psychologicalscience.org).



What Makes You Smile?

Psychologists use scientific methods to study topics such as happiness, love, and friendship.

FYI

Remind students that **modern psychology** has roots in **philosophy**. Psychology applies the scientific method to questions typically tackled by philosophers.

FYI

The birth of **modern experimental psychology** can be traced to December 1879 in Leipzig, Germany. Wilhelm Wundt and two students—Max Friedrich, a German, and G. Stanley Hall, an American—set up the apparatus for an experiment on the third floor of a shabby building called *Konvikt* (meaning “hostel” or “retreat”). The three men intended to collect data for Friedrich’s dissertation on the duration of apperception—the time lag between a subject’s recognition that he has sensed a cue and his physical response recording his recognition. An example is the time between hearing a ball bounce off the floor and then pressing a bell to indicate having heard this.



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WILHELM WUNDT [VOONT] (1832–1920)
Founder of modern psychology; he opened the first psychology laboratory.

Fascinating subjects such as aggression against others, apathy toward helping, gratitude, altruism, and the development of children as they grow into adolescents and young adults are examined in this textbook. The psychologists studying these concepts chose one of the many careers (see Appendix A: Careers in Psychology) available to those who decide to pursue psychology as an occupation.

PAUSE NOW OR MOVE ON

Turn to page 17 to review and apply what you’ve learned.

Modern Psychology’s Roots

WHAT’S THE POINT?

1-2 How did the study of psychology as a science get started?

We humans have probably been curious about ourselves and the world around us for as long as we have been around. But the history of modern psychology represents less than a century and a half’s work. Most other sciences are much older than psychology.

Wilhelm Wundt and the Beginning of Psychology as a Science

Psychology’s earliest pioneers shared a keen interest in understanding mental processes and, later, behavior. One of these early pioneers was German philosopher and physiologist **Wilhelm Wundt** (pronounced VOONT). As a youngster, Wundt was an unlikely candidate for the founder of a new science. The son of a Lutheran minister, Wundt had trouble concentrating in school, often received bad grades, and even had to repeat a grade. But the future “father” of psychology found his academic groove and eventually graduated from medical school. Wundt wasn’t that interested in practicing medicine, however; he wanted to understand human consciousness. So, he began conducting experiments that tested how perceptions, sensations, and feelings related to human behavior. Wundt was given laboratory space at the University of Leipzig to run his psychological experiments in 1879, which is now recognized as the “birth year” of psychology.

Wundt’s attempts to understand human consciousness used a process called *introspection*. Students trained in the introspection method were taught to describe their own conscious experiences in a systematic way. Each student received the same sound or visual experience, and then Wundt used their detailed descriptions as a foundation for understanding consciousness.

CROSS-CURRICULAR CONNECTION

TRM

History

Students will combine the history of psychology with U.S. and world history to produce an issue of a newspaper from an earlier time in psychology’s history.

- **Materials:** History of psychology and U.S. and world history textbooks; Internet access; 3 × 5 index cards, each marked with a year prior to 1950; 8½ × 11 plain paper
- **Description:** Each student should select an index card from the stack and then create a four-page newspaper for a day in the year marked on the card.

1. To research their news stories, students should use the available textbooks, plus one or all of the websites listed under **Cross-Curricular Activity: Read All About It! Wundt Opens a Psychology Lab**.
2. Half the newspaper’s content should contain stories related to psychology, and half should cover unrelated information or events.
3. Encourage students to include several shorter items as opposed to a few lengthy ones. Students may include photos, charts, cartoons,

and advertisements appropriate to the year of their newspaper. Challenge students to create ads promoting psychological theories or psychological advancements of the time.

4. Remind students that they cannot copy stories verbatim but must rewrite stories in their own words.

For information and tips on managing this project, see **Cross-Curricular Activity: Read All About It! Wundt Opens a Psychology Lab**.

Reducing consciousness to its basic elements was generally at the heart of Wundt's research.

One reason Wundt is considered the founder of modern psychology was his use of experimental methods to study consciousness. For example, in one study participants were told to press a button as soon as they saw a light come on. This was called Task 1. The time it took them to respond was recorded. Next, participants were told that either a red or a green light would come on. Their instructions were to press the left-hand button if the light was green and the right-hand button if the light was red. This was called Task 2. Again, the time to respond was recorded. Task 1 required only perception of a light before responding, but Task 2 required perception of the light, a decision about which color was shown, and a second decision about whether to push the left button or the right button. The time needed to respond to Task 2 was longer than that for Task 1, and Wundt believed the time difference between tasks measured the speed of mental processes.

Edward B. Titchener and Structuralism

One of Wundt's students, **Edward B. Titchener**, introduced **structuralism**, the first major school of thought in psychology. Just as a chemist tries to understand the different elements in chemical compounds, structuralists tried to understand the *structure* of conscious experience by analyzing the intensity, clarity, and quality of its basic parts. For example, picture a blade of grass. A structuralist might have lingered over the intensity of the green color of the blade of grass, the clarity of its texture, and the roughly rectangular shape of the blade. For Titchener and his students, successful descriptions of such basic elements were the building blocks of consciousness. Like Wundt, Titchener studied the structural elements of consciousness. Unlike Wundt, Titchener did not want to use hypothetical mental processes to explain consciousness. Instead, Titchener steered psychology toward a descriptive science he could see.



EDWARD B. TITCHENER
(1867–1927) Founder of
structuralism.

ARCHIVES OF THE HISTORY OF AMERICAN
PSYCHOLOGY, THE UNIVERSITY OF ARIZONA

Gestalt Psychology

Ultimately, structuralism did not produce many followers, and so it died out. One reason for this was that in practice it didn't prove to be very reliable. Perhaps the greatest contribution structuralism made to psychology is that it provided a theory for others to disprove, giving rise to other schools of thought in psychology.

Gestalt (a German word that means "configuration" and is pronounced gih-SHTALT) **psychology** was a psychological perspective that emphasized our tendency to integrate pieces of information into meaningful wholes. Opposed to merely analyzing the elements of consciousness, Gestalt psychologists suggested that adding the individual elements of an experience together creates something new and different—that *the whole is different from the sum of its parts* (see **Figure 1.1**). For example, think of the notes to your

structuralism Theory that the structure of conscious experience could be understood by analyzing the basic elements of thoughts and sensations.

Gestalt [gih-SHTALT] psychology Psychological perspective that emphasized our tendency to integrate pieces of information into meaningful wholes.

Check for Understanding

Ask: How do the terms **structuralism** and **functionalism** help define the focus of these schools of thought? (*Structuralism tries to understand the structure of conscious experience through analysis of its basic elements; functionalism studies how consciousness helps people function and adapt to their environment.*)

Beyond the Classroom

Critical Thinking To demonstrate the Gestalt principle that "the whole is different from the sum of its parts," pose the following questions about organ donation to your students. **Ask:**

- How much money would it take to convince you to sell your kidney?
- How much would you take for your liver? Your eyes? Your heart? Your brain?

(*Because we can live without a kidney or part of our liver, we may be willing to take money for those organs. When the organs we would lose for money mean a significant loss to the quality of life or life itself, we wouldn't take any sum. The body as a whole is greater than the value of each individual part.*)

TEACHING TIP

Gestalt psychology is often considered by many to be the most abstract school of psychology. If students are struggling with the music-note analogy cited in the text, try using examples with letters and words that follow the same logic.

FYI

The ancient Greek historian Herodotus tells of an early experiment that took place in the seventh century B.C. The ancient Egyptians believed themselves to be the oldest of all human races. The pharaoh reasoned that all language was inborn, and if children were not exposed to spoken language, they would speak the inborn language of humankind. This would be Egyptian, if Egyptians were the oldest race. The king kidnapped two infants and ordered a herdsman to raise them. The children were never to hear anyone speak. One day when the children were 2 years old, they cried out to the herdsman, "Becos!" This was the Phrygian word for bread. The king was forced to conclude that the Phrygians were an older race than the Egyptians.

Source: Hunt, M. (1993). *The story of psychology*. New York, NY: Doubleday.

FYI

William James is widely considered a rightful contender for the moniker “father of psychology.”

- At Harvard, James established the first psychology classes ever taught.
- He also wrote the first psychology textbook, a 12-volume opus entitled *Principles of Psychology*.

Differentiation

Have students explore how psychology has evolved and influenced other cultures around the world. Students should focus their research on one or both of the following points:

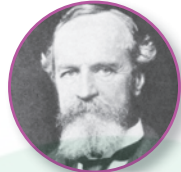
- Psychology flourished in Europe and North America during the late nineteenth and early twentieth centuries, but how is it viewed in other parts of the world?
- Is psychology a universally studied discipline? Why or why not?



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Figure 1.1
The Gestalt of Sound

In Gestalt theory, the whole (in this case, the collective notes of a song) is different from the individual parts (that is, the notes).



SCIENCE PHOTO LIBRARY/PHOTO RESEARCHERS, INC.

WILLIAM JAMES (1842–1910) First American psychologist and author of the first psychology textbook.

functionalism Theory that emphasized the functions of consciousness or the ways consciousness helps people adapt to their environment.

favorite song. Individually, each note means little, but put them together and you have a great tune. Combining the elements, then, creates something that did not exist before. Most prominent Gestalt psychologists fled Nazi Germany in the 1930s, but their work resurfaced in new psychological theories later in the century.

William James and Functionalism

Another psychologist who disagreed with the structuralist approach was Harvard

University professor **William James**. James, the first American psychologist, once noted that the first psychology lecture he ever heard was his own. He went on to write the first psychology textbook, published in 1890, which influenced thousands of students over the next several decades. For James, psychology needed to study the *functions* of consciousness, or the ways consciousness helps people adapt to their environment, a view that became known as **functionalism**. James was influenced by Charles Darwin's theory of evolution and believed that mental processes evolved over time. James thought that we developed useful habits—such as washing our hands before eating or brushing our teeth after a meal—because they help us function more effectively in our daily lives. That is, washing our hands keeps us from eating germs and becoming sick, and brushing our teeth keeps them from falling out. James's idea was that consciousness helped us adapt to and function in our surroundings, and he thought that understanding this idea should be the goal of psychology.

PAUSE NOW OR MOVE ON

Turn to page 18 to review and apply what you've learned.

Psychology in the Twentieth Century

WHAT'S THE POINT?

1-3 In what ways did twentieth-century psychologists change how psychology was studied?

As the 1900s began, the science of psychology was heading in new directions. Perhaps the most influential figure of this time was a man whose name you have likely heard associated with psychology, Sigmund Freud.

Sigmund Freud and Psychoanalysis

Few outside psychology have heard of structuralism and functionalism, but almost everyone has heard of the Austrian physician **Sigmund Freud**. In 1900, Freud introduced the world to **psychoanalysis**, a theory of personality and therapeutic technique that attributes our thoughts and actions to unconscious motives and conflict. For example, a child who is afraid to express anger toward a parent might draw on the parent's newly painted bedroom walls or embark on some other destructive behavior.

The stereotypical image of a therapist comes from pop culture notions surrounding Freud, which countless cartoons have poked fun at over the years. Freud's approach to psychology differed from Titchener's structuralism and James's functionalism in two key ways:

1. Psychoanalysis focused on abnormal behavior, which Freud attributed to unconscious drives and conflicts, often stemming from childhood. For instance, Freud thought that a conflict experienced in childhood, such as a difficult time in potty training, could reappear for that person as an obsession for order and cleanliness later in life.
2. Psychoanalysis relied on personal observation and reflection instead of controlled laboratory experimentation as its means of discovery. While Freud claimed his work was scientific, it really wasn't because he relied on self-reported reflections rather than scientific methods to gather information.

Freud died in 1939, and many of his ideas have since been disproved. However, elements of Freud's original theory are still part of pop culture. A "Freudian slip," for example, is a misstatement reflective of something you'd *like* to say. "Do you want to study for tomorrow's kizz?" a boy might stammer to the girl of his dreams. The term "anal retentive" comes from one of Freud's developmental stages and refers to someone who is excessively neat, clean, and compulsive (stuck in the "anal stage," where we supposedly come to terms with bodily functions). Freud's greater legacy, however, was his novel approach to understanding behavior, and some of these ideas have been incorporated into *psychodynamic theory*, which is a modernized version of Freud's original theories (and is discussed in more detail later in this module). Psychologists influenced by psychodynamic theory still assume, as Freud did, that our unconscious thoughts, inner conflicts, and childhood experiences significantly affect our personality and behaviors.

Ivan Pavlov, John Watson, and Behaviorism

In 1906, the classic studies on animal learning of Russian physiologist **Ivan Pavlov** fueled a move in psychology toward an interest in *observable* behaviors and away from the self-examination of inner ideas and experiences. Pavlov's emphasis on things we can see (rather than mental processes) quickly caught on in the United States. Consider the following, which appeared in *Psychological Review* seven years after Pavlov first published his work and

psychoanalysis Freud's theory of personality; also, a therapeutic technique that attempts to provide insight into thoughts and actions by exposing and interpreting the underlying unconscious motives and conflicts.



SIGMUND FREUD (1856–1939) Founder of psychoanalysis, a controversial theory about the workings of the unconscious mind.

KEystone PICTURES USA/ALAMY



"I'm right there in the room, and no one even acknowledges me."

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IVAN PAVLOV (1849–1936) Russian physiologist and learning theorist famous for the discovery of *classical conditioning*, in which learning occurs through association.

SOVIETPHOTO

TEACHING TIP TRM

Many people think that **psychoanalysis** is psychology—that is, that the two terms are interchangeable. Make sure students understand that psychoanalysis represents only one theory of psychology—one that is viewed as flawed by many modern psychologists. Make sure to emphasize the drawbacks of Freud's methodology while acknowledging his great contributions to the study of the mind and human behavior. Watch *Freud: The Hidden Nature of Man* to explore the work of this seminal figure.

TEACHING TIP

Link the information here about psychoanalysis with what students will study in Module 28. When Randy discusses being "stuck" in the anal stage of development, he is referring to a Freudian term called *fixation*. Freud proposed that people could become stuck, or *fixated*, in a particular stage of development, exhibiting behaviors in adulthood that could be traced to unresolved unconscious conflicts from the earlier stages in life.

FYI

Pavlov was not a psychologist. He was a physiologist whose research focused on topics that interested him most: digestion and blood circulation.

TEACHING TIP

Emphasize that **behaviorism** has rigid rules about what is or is not in the realm of psychology. If a behavior could not be observed, it was not considered in the realm of psychology according to strict behaviorists.

behaviorism The theory that psychology should only study observable behaviors, not mental processes.

humanistic psychology A perspective that focuses on the study of conscious experience, the individual's freedom to choose, and the individual's capacity for personal growth.



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JOHN B. WATSON (1878–1958) Founder of behaviorism, the theory that psychology should restrict its efforts to studying observable behaviors, not mental processes.



BACHACH/GETTY IMAGES

B. F. SKINNER (1904–1990) American behavioral psychologist who developed the fundamental principles and techniques of *operant conditioning* and devised ways to apply them in the real world.

FYI

Humanistic psychology was dubbed the “third force” in psychology because of its entry point in time. Prior to 1960, the two dominant “forces” in psychology were **psychoanalysis** and **behaviorism**.

FYI **TRM**

A major force in behaviorism, B. F. Skinner conducted seminal experiments in operant conditioning. You may wish to use **B. F. Skinner: A Fresh Appraisal** to examine the issues surrounding this researcher.

struck a nerve in the world of psychology: “Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of human behavior” (Watson, 1913). It can be argued that the words in this article sent the study of mental processes into hibernation for the next 40 years.

John B. Watson, the author of this article that encouraged psychologists to dismiss the study of consciousness, considered structuralism and functionalism failures, given his belief that the methods of these perspectives were unscientific. He wanted psychology to move in a more experimental direction, and to that end he launched **behaviorism**, the theory that psychology should only study observable behaviors, not mental processes. Watson's work made psychology more objective and scientific in its methods, although most behaviorists today recognize the significance of studying both mental processes and behaviors.

Watson's behaviorism was the most dominant school of thought in psychology in the twentieth century, and he promoted the study of learned reflexes originally developed by Pavlov. This method included precise experimental observations of human reactions to various stimuli. His most famous study paired the presentation of a furry, white object to an infant along with the presentation of a loud noise. The loud noise frightened the infant, but pairing a furry, white object with the loud noise also led the child to fear furry, white objects. Later, the sight of something like a white rabbit would lead to uncontrollable crying by the infant.

In the years since, this school of thought has been modified somewhat by other behaviorists, such as **B. F. Skinner**. Today, behaviorism focuses on learning through rewards and observation, and studies that include frightening small children would neither be approved by a research review panel nor be conducted by any ethical psychologist.

Abraham Maslow, Carl Rogers, and Humanistic Psychology

Behaviorism and psychoanalysis maintained their hold on the field into the 1960s, when a “third force” began to influence psychology (Schultz & Schultz, 2008). **Humanistic psychology**, led by **Abraham Maslow** and **Carl Rogers**, rejected the idea that humans are controlled by a series of rewards and reinforcements. Instead, they emphasized *conscious experience* as the proper focus of psychology. They also believed that humans have free will in their decision making and that healthy people strive to reach their full potential. Furthermore, humanistic psychologists did not believe that humans could be reduced to various parts and pieces. That is, an entire human—the whole person—is different from the sum of all the parts (brain, neurons, emotions, and so on). Does this remind you of an older school of thought? Yes, the humanistic psychologists were influenced by the Gestalt psychologists who preceded them.

Humanistic psychology showed great promise early in its existence, but many believe its subsequent decline resulted from the lack of scientific research to back up its proposals (Seligman & Csikszentmihalyi, 2000). The

ACTIVE LEARNING

Research: Influential Figures in Psychology

Have students research the life of a psychologist or scientist mentioned in this module or of any influential figure from psychology's history. Students should focus their research on the following points:

- Was this person's childhood remarkable or predictive of his or her future success in psychology? Why or why not?
- What type of schooling did he or she receive?
- What interests outside of psychology did he or she pursue? Did these impact his or her research?
- What interesting facts made this person more real to you?

Make sure that students include a list of their research resources in their reports.



COURTESY OF CARL ROGERS MEMORIAL LIBRARY

CARL ROGERS (1902–1987)
Humanistic psychologist who developed *client-centered therapy* and stressed the importance of acceptance, genuineness, and empathy in fostering human growth.



THE GRANGER COLLECTION, NEW YORK

ABRAHAM MASLOW (1908–1970) Humanistic psychologist who proposed the *hierarchy of needs*, with *self-actualization* as one of the ultimate psychological needs.

idea of striving to reach one's potential, proposed by Maslow 40 years ago, has been picked up by the *positive psychologists* of the twenty-first century, as you will see later in this module.

Jean Piaget and Child Development

Swiss biologist and psychologist **Jean Piaget** (pronounced pee-ah-ZHAY) is another pioneer; he is best known for his work on how children develop their thinking abilities. His early work focused on biology, but after moving to France in the 1920s, his interest turned to psychology. When he began teaching in a school known for administering intelligence tests, Piaget noticed an interesting phenomenon: Students of a certain age consistently made mistakes on the tests that older children did not make. This led Piaget to believe that younger children thought differently than older children. Piaget published more than 60 books over the next 50 years that most often dealt with how thinking develops in children.



JEAN PIAGET [pee-ah-ZHAY] (1896–1980)
Pioneer in the study of developmental psychology who introduced a stage theory of cognitive development that led to a better understanding of children's thought processes.

© PIRELLA GÖTTSCHE LOWE

PAUSE NOW OR MOVE ON

Turn to page 18 to review and apply what you've learned.

Psychology's American Groundbreakers

WHAT'S THE POINT?

1-4 How did psychology's groundbreakers move psychology forward and help advance gender and race equality?

Like other academic fields, early psychology lacked the ethnic and gender diversity it has today. Although difficult to imagine by today's standards, women and minority students were often discouraged from attending colleges

ENRICH

Major Concepts in Modern Psychology

- On the board, write the names of the three major schools of modern psychology: **psychodynamic**, **humanistic**, and **behavioral**.
- As you say each of the following concepts, have students call out the school to which it is linked.
 - operant conditioning
 - positive psychology
 - hierarchy of needs
 - ego
 - learned helplessness
 - self-actualization
 - id
 - systematic desensitization
 - superego
 - psychosexual development
 - unconditional positive regard
 - client-centered therapy

FYI

Jean Piaget based much of his **child development theory** on his observations of his own children. Their struggles with cognitive processes, especially in the preoperational stage, inspired their father to investigate the cognitive differences between children and adults.

DIGITAL CONNECTION TRM

Students can relate the history of psychology to their own lives by searching the Internet for historical events in the field of psychology that happened on their birthday. Some good web sources include the following:

- Today in the History of Psychology (www.cwu.edu/~warren/today.html)
- American Psychological Association—Division 26 (www.psych.yorku.ca/orgs/apa26)
- Classics in the History of Psychology (psychclassics.yorku.ca)
- Psychology Museum and Resource Center (psychology.okstate.edu/museum/history/index.html)

More details are available in **Technology Application Activity: What Happened on Your Birthday?**

Beyond the Classroom TRM

Bellringers Use the following prompts as discussion starters:

- Why might it be difficult to explain human behavior using only one perspective?
- How is each of the schools of thought limited in explaining human behavior?
- How might psychologists encourage men and women of all cultural and social backgrounds to pursue a career in psychology?

At this point, you may want to use **Cooperative Learning Activity: Diversity in Textbooks**.

Reteach TRM

Graphic Organizer Reinforce students' knowledge of key figures in psychology by using the **Graphic Organizer: Famous Names in Psychology**. Students can fill in the information on each famous name, connecting these people with the contributions they made to further our knowledge of human behavior.

Figure 1.2
Psychology's
Groundbreakers

 G. Stanley Hall (1844–1924)	1879 Wilhelm Wundt opens the first psychology laboratory in Leipzig, Germany.	 Mary Whiton Calkins (1863–1930)
 Alfred Binet (1857–1911)	1890 William James publishes the first psychology textbook, <i>Principles of Psychology</i> .	 Francis Cecil Sumner (1895–1954)
 Karen Horney (1885–1952)	1892 G. Stanley Hall founds the American Psychological Association (APA). E. B. Titchener introduces structuralism.	 Mamie Phipps Clark (1917–1983)
 Albert Bandura (1925–)	1900 Sigmund Freud publishes his psychoanalytic views in <i>The Interpretation of Dreams</i> .	 Daniel Kahneman (1934–)
 Martin Seligman (1942–)	1905 Mary Whiton Calkins becomes the first woman to be president of the APA. Alfred Binet develops the first intelligence test.	 Judith Rodin (1944–)
	1906 Ivan Pavlov publishes his results on learning by association.	
	1908 Margaret Floy Washburn becomes the first woman to receive a doctoral degree (Ph.D.) in psychology.	
	1913 John B. Watson publishes "Psychology as the Behaviorist Views It."	
	1920 Francis Cecil Sumner becomes the first African-American to earn a doctoral degree in psychology.	
	1926 Jean Piaget publishes <i>The Language and Thought of the Child</i> .	
	1933 Inez Beverly Prosser becomes the first African-American woman to earn a doctoral degree in psychology.	
	1938 B. F. Skinner promotes behaviorism, publishing <i>The Behavior of Organisms</i> .	
	1939 Kenneth Clark and Mamie Phipps Clark begin work that will be cited by the U.S. Supreme Court 1954 decision ending racial segregation in public schools.	
	1945 Karen Horney challenges the male bias in Freud's psychoanalytic theory and proposes a social-cultural approach.	
	1950 Erik Erikson publishes <i>Childhood and Society</i> , outlining stages of psychosocial development.	
	1954 Abraham Maslow presents the humanistic perspective. Gordon Allport publishes <i>The Nature of Prejudice</i> .	
	1961 Albert Bandura stresses the importance of imitation in learning, proposing a social-learning theory.	
	1969 John Berry calls attention to the importance of cross-cultural research in psychology.	
	1974 Eleanor Maccoby and Carol Jacklin publish <i>The Psychology of Sex Differences</i> .	
	1981 Roger Sperry receives a Nobel Prize for research on split-brain patients.	
	1993 Psychologist Judith Rodin becomes the first female president of an Ivy League school.	
	1998 Martin Seligman's APA presidential address launches the positive psychology movement.	
	2002 Daniel Kahneman receives a Nobel Prize for research on decision making.	

and universities at the time of and for decades after psychology's birth. If this seems shocking, remember, for example, that women were not allowed to vote in the United States until 1920. The spirit of the times in North America and in Europe (where psychology flourished) favored the advancement of white men at the expense of nonwhite men and all women. These racial and gender barriers meant white males dominated psychology (and all sciences) because others rarely had the opportunity to gain the education, knowledge, and training necessary to become a psychologist. Several groundbreakers in psychology excelled in, and in spite of, this hostile cultural climate (see **Figure 1.2**).

G. Stanley Hall was a student of Wundt's who achieved a number of psychological firsts. Hall was the first American to receive a doctoral degree

FYI

Three Nobel Prize winners are included in this chart of psychology's important people:

- Ivan Pavlov won the Nobel Prize in Physiology or Medicine in 1904 for his work on digestion in dogs. Pavlov established the principles of **classical conditioning**, a fundamental theory of learning supported by behavioral psychology. Pavlov's work had a profound influence on John B. Watson.
- Roger Sperry won the Nobel Prize in Physiology or Medicine in 1981 for his work with split-brain patients. Sperry's work established that the left and right hemispheres of the brain have different functions.
- Daniel Kahneman won the 2002 Nobel Prize in Economics for his work with Amos Tversky on how people are risk-averse in making economic decisions. Kahneman and Tversky (who had passed away before the prize was awarded) showed that people do not usually make rational decisions when faced with economic loss, which is contrary to economic theory.

(Ph.D.) in psychology. He also opened the first psychology laboratory in the United States (at Johns Hopkins University), and he was the first American Psychological Association (APA) president, elected in 1892.

Working with William James, Mary Whiton Calkins had to overcome discrimination and prejudice against women to become the first woman to complete the requirements for a Ph.D. in psychology, in 1895. Harvard at that time did not admit women and so would not award her a degree. Years later, Harvard offered to give her a degree from Radcliffe College (established by Harvard to educate women). Calkins refused the offer, stating that she had completed her work at Harvard, not Radcliffe. Calkins was elected president of the APA in 1905.

Margaret Floy Washburn was Edward B. Titchener's first graduate student at Cornell University, and she was the first woman to receive a Ph.D. in psychology. In 1908, Washburn wrote the first textbook on comparative psychology, which examined animal behavior.

Francis Cecil Sumner, in 1920, became the first African-American to receive a Ph.D. in psychology. Sumner wrote many articles on racial prejudice, education for African-Americans, and nature–nurture issues. Sumner also established the psychology department at Howard University.

Inez Beverly Prosser, the first African-American woman to earn a Ph.D. in psychology, completed the requirements in 1933 at the University of Cincinnati. She studied the development of African-American children in segregated and integrated schools.

Kenneth Clark and Mamie Phipps Clark were educational psychologists whose research was presented as evidence to the U.S. Supreme Court during the landmark court case on desegregating schools, *Brown v. Board of Education*. The Clarks helped show that internalized racism was a product of the stigmas attached to “separate but equal” schools for white children and black children. For instance, black children attending a segregated school (where they were apart from white children) often viewed “white” as good and pretty and “black” as bad and ugly. The Supreme Court listened to the Clarks' findings and mentioned them when ruling in 1954 that segregated schools were unconstitutional. Kenneth Clark was also the first African-American to be president of the APA.

Today, over two-thirds of all psychology doctorates are awarded to women, and nearly half of the presidents elected between 1996 and 2009 of the strongly science-focused Association for Psychological Science were women (Myers, 2010). Worldwide, psychology is growing rapidly. In 1977, China had no psychology departments in any of its universities. Less than thirty years later, there were over 200 (Tversky, 2008). But although roughly 33 percent of the U.S. population consists of minorities, the proportion of minority students in graduate programs is far from one in three. We can only hope that this gap will continue to close as university psychology departments across the country work to recruit the best and brightest students from all backgrounds. To meet the demands of our increasingly multicultural and ethnically diverse population, psychology will need to continue evolving.

PAUSE NOW OR MOVE ON

Turn to page 19 to review and apply what you've learned.



KENNETH CLARK (1914–2005) AND MAMIE PHIPPS CLARK (1917–1983) Researchers whose work was used in the *Brown v. Board of Education* case that overturned segregation in schools.

LIBRARY OF CONGRESS

FYI

- Kenneth Clark was elected president of the APA in 1969, even though African-Americans have been members of the organization since 1920.
- Even though roughly half of all Ph.D.s are awarded to women each year, most full-tenured faculty positions are held by men.
- While president of Clark University, G. Stanley Hall saw the graduations of several famous psychologists, including Francis Cecil Sumner, the first African-American to receive a Ph.D. in psychology.

MULTICULTURAL CONNECTIONS

Have students replicate Kenneth and Mamie Clark's research by interviewing students of different ethnic groups—notably African-American, Latino, Middle Eastern, Native American, and Asian—about how they view portrayal of their ethnicities in toys and the media.

- If you have students in your class who are members of these ethnicities, have them interview students of a different ethnicity.
- Remind all students to be sensitive when discussing ethnic and racial bias. You may wish to have students review their questions with you before they proceed with their interviews.
- Students should analyze their results using simple descriptive statistics (mean, median, and standard deviation).
- Schedule time for students to present their findings to the class. Encourage students to include charts and illustrations in their presentations.

CROSS-CURRICULAR CONNECTION

Government

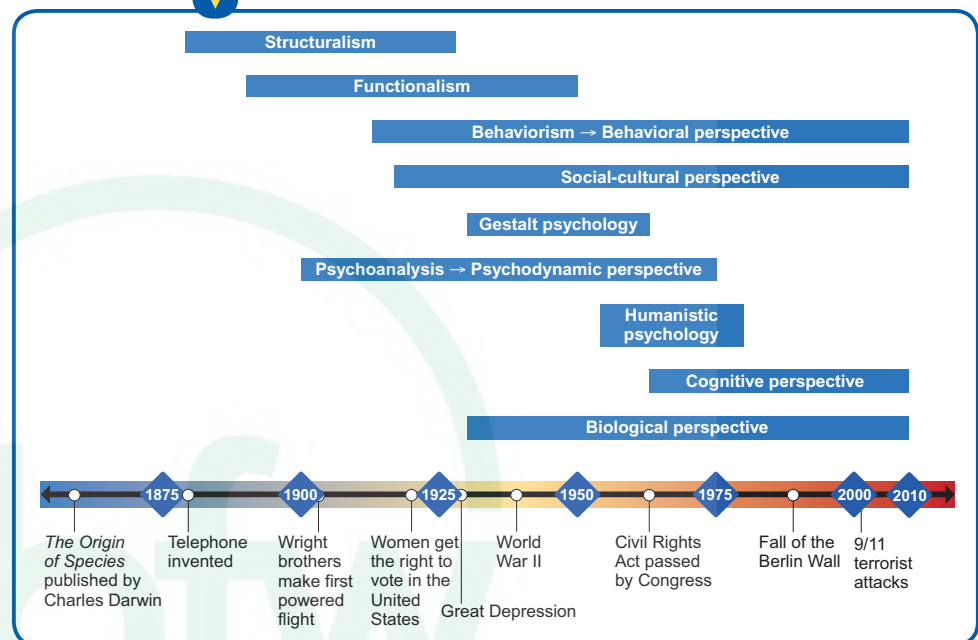
Brown v. Board of Education of Topeka, Kans., (1954) marked the first time that psychological research played a role in a Supreme Court decision. Have students investigate other landmark cases they have learned about in government class to see if psychological research is cited in either the majority or dissenting opinion.

TEACHING TIP

The **psychodynamic perspective** is less concerned with the sexual emphasis Freud advocated. Psychodynamic psychologists focus more on childhood relationships and how they affect normal behavior.

Figure 1.3
Historical Development of Psychology's Main Schools of Thought

This figure shows the periods in which each psychological perspective has had its most profound influence on psychology's development. (Adapted from Schultz & Schultz, 2008.)



Six Psychological Perspectives

WHAT'S THE POINT?

1-5 How do six psychological theories explain thinking and behavior?

We can view behavior from many viewpoints, or perspectives. *Psychological perspectives, schools of thought, and psychological approaches* are all synonyms for the ways in which psychologists classify collections of ideas. Put another way, the psychologist who believes in a particular collection of ideas is said to view behavior from that particular perspective. For instance, a behaviorist views psychology from a behavioral perspective.

Psychology has seen many perspectives come and go. We have already noted the emergence of psychoanalysis, behaviorism, and humanistic psychology. The other three perspectives discussed here are the cognitive perspective, the biological perspective, and the social-cultural perspective (see Figure 1.3).

To understand these six perspectives, let's apply each to the same real-life possibility: whether or not a person helps a stranger pick up a spilled sack of groceries when given the opportunity. Why do some people help when others don't? Each of the six perspectives has an explanation.

ACTIVE LEARNING

TRM

Perspectives in Scientific Psychology

Working in small groups, students will measure the prominence of the major schools of thought in scientific psychology—psychoanalysis, behaviorism, cognitive psychology, and neuroscience—by examining current textbooks for terms from each school.

You will need at least one introductory psychology textbook for each group. Texts should be relatively current. Each group will measure the number of times a perspective is mentioned in their assigned textbook and then compute simple descriptive statistics to determine which school is mentioned most frequently.

For more information, see **Cooperative Learning Activity: What Perspective Is Dominant in Scientific Psychology?**

Psychologists who are psychoanalysts work from the *psychodynamic perspective*, a school of thought that focuses on how helping behavior springs from unconscious drives and conflicts. A psychologist influenced by the psychodynamic perspective might suggest that a person does *not* help the stranger pick up the groceries because she has an unresolved childhood conflict about her father always yelling at her to pick up her toys. The assumption is that there is a conflict, from long ago, that needs to be resolved. The psychologist assumes that until it is resolved, the conflict will affect behavior.

Psychologists who are behaviorists work from the *behavioral perspective*, a school of thought that focuses on how we learn observable responses. As we learned earlier, behaviorists believe we learn certain responses through rewards, punishments, and observation. So, they might suggest that a person helps the stranger pick up the spilled sack of groceries because that person had observed someone being rewarded for helpful behavior in the past. Learning that rewards come to those who help others fosters helping behavior.

Psychologists who are humanistic therapists work from the *humanistic perspective*, a school of thought that focuses on how healthy people strive to reach their full potential. A humanistic psychologist might suggest that a person who has met his own basic needs (hunger, thirst, shelter) would be able to reach out socially and help another person in need.

Structuralism, functionalism, and Gestalt psychology are the forerunners of the **cognitive perspective**, a school of thought that focuses on how people think—how they take in, process, store, and retrieve information. Remembering something you’ve learned, for example, is a cognitive activity. From the cognitive perspective, helping a stranger could be a function of how we think about or interpret a situation. We may choose to help the stranger who spills a bag of groceries because we *think* it will make us look good to others. However, if we think helping will cause us to look silly, then we may well leave the stranger to pick up the groceries alone.

The **biological perspective** is a school of thought that focuses on physical structures and substances underlying a particular behavior, thought, or emotion. Biological psychologists might remind us that levels of a naturally occurring “feel-good” chemical found in the brain could affect whether we help the stranger or not. Those lacking normal amounts of this brain chemical may be depressed, and depression could keep the person from wanting to help the stranger pick up the spilled groceries.

The **social-cultural perspective** is a school of thought that focuses on how thinking or behavior changes in different situations or as a result of cultural influences. Social-cultural psychologists might tell us that a person is more likely to help the stranger if that person is with some close-knit family members and 50 feet from his front door, and less likely if he is alone in a crowded, big-city grocery store he has never been to before.

As you can see, no one perspective lays claim to having all the answers to the question “What makes us tick?” But look at these six perspectives collectively (see [Table 1.1](#)). Can you see why most psychologists today subscribe to more than one perspective? These six perspectives complement one another, and psychologists draw from them all in their attempts to understand behavior and mental processes. Sometimes they even look beyond these six—to developments on psychology’s horizon—in their efforts to understand human behavior.

cognitive perspective School of thought that focuses on how people think—how we take in, process, store, and retrieve information.

biological perspective School of thought that focuses on the physical structures and substances underlying a particular behavior, thought, or emotion.

social-cultural perspective School of thought that focuses on how thinking or behavior changes in different situations or as a result of cultural influences.

FYI

The cognitive perspective

experienced immense growth as computer technology increased.

- Many early models of human thinking were analogous to computer models of processing.
- Today, cognitive psychology views the mind as more complex than even the most complicated computer system.

Beyond the Classroom

Apply Give students a different scenario than the one provided in the text and ask them to explain why the behavior occurred. Help students justify their explanations with one or more of the perspectives from the text. Consider the following scenarios for your class:

- A friend of yours passes you in the hall and doesn’t say hello. Explain why your friend didn’t say hello.
- A large truck cuts you off in traffic, forcing you to drive on the shoulder for a moment to avoid a collision. Explain why the truck driver cut you off.
- Your rival school’s football team keeps the first-string players in the game even though they are winning by a significant number of points. Why does the rival’s coach keep the good players in?

Beyond the Classroom

Analyze Some early schools of thought in the field of psychology faded away as technology revealed their limitations. Other schools emerged as technology began to provide insight into human behavior. Consider the following:

- What schools would have been phased out as technology became available? (*Structuralism and functionalism experienced a gradual fading as technology gave insight into the workings of the brain, learning, and body functions. Psychoanalysis also became less attractive as technology revealed the workings of the brain.*)
- What schools have thrived with the advent of new technologies?
- What schools may be unaffected by technology as we currently know it?

ACTIVE LEARNING**Comparing Perspectives**

1. Divide students into six groups.
2. Assign each group one perspective from modern psychology.
3. Give all groups a similar behavior. This should be something that they or their friends probably have experienced—for example, “people who fight with their parents,” “people who never study for tests,” or “people who are always late.”
4. Have students in each group explain that behavior from their assigned perspective.

TEACHING TIP

Students often want to know which perspective is “right.” Emphasize that psychology is a diverse field that subscribes to an **eclectic approach**—that is, using multiple theories to explain human behavior.

Reteach

Concept Web Have students work in pairs or small groups to create a concept web linking the modern schools of thought with the historical perspectives. Students should show how the three historical perspectives that are still flourishing today have influenced other schools.

Table 1.1**Six Perspectives in Psychology**

Perspective	Why Do We Help?
<ul style="list-style-type: none"> • Cognitive How we process information 	Our individual interpretations of an event affect how we respond.
<ul style="list-style-type: none"> • Biological How our biological structures and substances underlie a given behavior, thought, or emotion 	Our brain chemistry controls the emotions and thoughts that eventually produce helping behavior.
<ul style="list-style-type: none"> • Social-Cultural How thinking and behavior change depending on the situation or as a result of cultural influences 	If we come from a cultural background that values helping, we're more likely to help. We're also more likely to help if we are in a comfortable situation, such as with a good friend, than if we are in a large, unfamiliar crowd.
<ul style="list-style-type: none"> • Behavioral How we learn through rewards, punishments, and observation 	If we have witnessed or been rewarded for helping behavior in the past, we are more likely to help later.
<ul style="list-style-type: none"> • Humanistic How healthy people strive to reach their full potential 	If our needs for nourishment and safety have been met, we are more likely to feel we can reach out and help others.
<ul style="list-style-type: none"> • Psychodynamic How we are affected by unconscious drives and conflicts 	Unresolved inner conflicts can affect whether or not we help others.

PAUSE NOW OR MOVE ON

Turn to page 19 to review and apply what you've learned.

Psychology in the Twenty-First Century**WHAT'S THE POINT?****1-6 What are the basic ideas behind three of psychology's developing areas?**

Psychology continues to grow. Three particularly strong developing areas in psychology are behavior genetics, evolutionary psychology, and positive psychology.

Those studying **behavior genetics** focus on how much our genes and environment influence our individual differences. Does this sound like a combination of biology and behaviorism? You bet. Apply the behavior genetics perspective to the helping example. A psychologist interested in

behavior genetics The school of thought that focuses on how much our genes and our environment influence our individual differences.

behavior genetics might ask two questions: Is there a helpfulness trait? If so, is it triggered into action by growing up in a family that promotes and values helping those in need? If the answer to both questions is *Yes*, and if you possess the helping trait and the helpful family, then you'll be bending down to help that stranger pick up the oranges and the loaf of bread. From the perspective of behavior genetics, helping behavior is the product of learning *and* inherited genetic traits.

Some psychologists study behaviors that helped our ancestors survive. These psychologists hope to gain insight into behavior by using the **evolutionary perspective**. This approach combines biological, psychological, and social aspects of human behavior. Is it possible to explain helping from the perspective of evolutionary psychology? Well, helping may have been a behavior generally seen as favorable, and helping could have occurred in the past because helping behavior made us more desirable to others. Those who were well liked in the community had good odds for surviving and successfully producing offspring.

Humanistic psychology is the forerunner of **positive psychology**, which became a force after Martin Seligman's 1998 APA presidential address on the positive psychology movement. Positive psychology shares with humanistic psychology a focus on wellness and on healthy people reaching their full potential, but it differs in one crucial way: Positive psychology is firmly grounded in psychological science, thereby avoiding humanistic psychology's lack of scientific research to support its theoretical foundations.

evolutionary psychology

School of thought that focuses on the principles of natural selection to study the roots of behavior and mental processes.

positive psychology

A movement in psychology that focuses on the study of optimal human functioning and the factors that allow individuals and communities to thrive.

PAUSE NOW OR MOVE ON

Turn to page 20 to review and apply what you've learned.

SUMMARY AND FORMATIVE ASSESSMENT

MODULE 1

Thinking About History and Perspectives in Psychological Science

The Definition of Psychology

WHAT'S THE POINT?

1-1 What is psychology, and what kinds of topics do psychologists study?

- Psychology is the scientific study of behavior and mental processes.
- Psychologists rely on scientific research methods to answer questions.

- Any observable behavior or mental process can be studied by psychologists, with either a basic- or applied-research focus.

Apply What You Know

- Which of the following best matches the definition of psychology?
 - scientific research about why we act and think in the ways we do
 - the study of people

ACTIVE LEARNING

Have students research which universities offer graduate study in **behavior genetics** or related fields in **neuropsychology**.

- How many programs are there? Are any near your area?
- What job opportunities are available to people who get a degree in behavior genetics?

FYI

These three schools of thought have names that describe their respective areas of focus:

- **Behavior genetics** studies the relationship between human behavior and the nature–nurture issue.
- **Evolutionary psychology** studies what qualities have evolved through natural selection that have helped humans adapt through the years.
- **Positive psychology** looks at what makes life good, fulfilling, and positive.

TEACHING TIP

Discussion of evolution is controversial in some regions. Be sensitive to your students' feelings about evolution while educating them about how the principles of evolution have been applied to explaining human behavior. Make sure students understand how the term *theory* is used in science.

TEACHING TIP

Although **humanistic psychology** and **positive psychology** have much in common, many positive psychologists contend that humanistic psychology lacks scientific rigor in its investigations of human behavior.

Beyond the Classroom **TRM**

Debate Positive psychologists feel that studying the positive aspects of human behavior is important because being happy is not just the absence of sadness or illness. Have students discuss whether positive psychology is a legitimate way to study behavior. **Ask:**

- Is being happy more than just not being sad or ill? Why or why not?
- How is the study of positive traits similar to the study of negative qualities? How are the studies of these traits different?
- Should the government fund positive psychology like it funds negative psychology? Why or why not?

At this point, you may want to use **Application Activity: A Beautiful Day**.

CLOSE

Closing Activity TRM

Have students complete **Critical Thinking Activity: The Science/Art Continuum: Where Does Psychology Fit?** as a way to determine their understanding of the scientific nature of psychology. Help them see that as psychology matures as a discipline, it becomes less artistic and more scientific.

Answers The Definition of Psychology: Apply What You Know

1. (a)
2. (d)

Answers Modern Psychology's Roots: Apply What You Know

3. (c)
4. (a)

Answers Psychology in the Twentieth Century: Apply What You Know

5. (a)
6. (b)

- c. thinking about human behaviors
- d. investigations of the human psyche and why we think the things we think

2. What is the primary tool psychologists use to answer questions about behavior and thinking?
 - a. insight
 - c. the unconscious mind
 - b. dream analysis
 - d. the scientific method

Modern Psychology's Roots**WHAT'S THE POINT?**

1-2 How did the study of psychology as a science get started?

- Wilhelm Wundt is considered the founder of modern psychology because he established a lab and used experimental methods to study consciousness.
- Edward B. Titchener introduced structuralism, the theory that the structure of conscious experience could be understood by analyzing the basic elements of thoughts and sensations.
- Gestalt psychology emphasized our tendency to integrate pieces of information into meaningful wholes.
- William James introduced functionalism, the theory that explored the ways consciousness helps people adapt to their environment.

Apply What You Know

3. Wilhelm Wundt is considered the founder of psychology as a science because
 - a. it was decided that clinical psychology should become a medical field.
 - b. of his important research on the unconscious mind.
 - c. he established the first experimental psychology laboratory.
 - d. he won the Nobel Prize for science.
4. Which research question would have been most interesting to the Gestalt psychologists?
 - a. Why do we perceive objects in specific groups?
 - b. Can introspection be used to describe thought accurately?
 - c. What is the structure of conscious experience?
 - d. How is our personality expressed in our dreams?

Psychology in the Twentieth Century**WHAT'S THE POINT?**

1-3 In what ways did twentieth-century psychologists change how psychology was studied?

- Sigmund Freud introduced psychoanalysis, a theory of personality and therapeutic technique that attributes our thoughts and actions to unconscious motives and conflicts. Freud's new approach to understanding behavior and some of the ideas that developed from it have been incorporated into psychodynamic theory, which is a modernized version of Freud's original theories.
- Ivan Pavlov fostered interest in studying observable behavior by reporting how animals learn in certain situations.
- John B. Watson introduced behaviorism, the theory that psychology should only study observable behaviors, not mental processes. Behaviorism was the most dominant school of thought in psychology during the twentieth century and was later adapted and expanded by other behaviorists such as B. F. Skinner.
- Humanists such as Abraham Maslow and Carl Rogers emphasized conscious experience as the proper focus of psychology. They believed that humans have free will and that healthy people strive to reach their full potential.
- Jean Piaget's pioneering research in developmental psychology focused on how children develop their thinking abilities.

Apply What You Know

5. Sigmund Freud's theories differed from all other early psychological theories because of his emphasis on
 - a. the effect of the unconscious mind on our thinking and behavior.
 - b. our conscious experience and perception of the world around us.
 - c. introspection as a form of gathering data about thinking.
 - d. experimental research and gathering data on observable behaviors.

6. What was the primary complaint that Watson had about early psychological theories?
- Early theories emphasized human actions instead of the basic thinking behind them.
 - Early theories addressed unconscious thinking instead of conscious experiences.
 - Early theories were based on experimental methods instead of introspection.
 - Early theories were too closely tied to William James's work.

Psychology's American Groundbreakers

WHAT'S THE POINT?

1-4 How did psychology's groundbreakers move psychology forward and help advance gender and race equality?

- G. Stanley Hall was the first American to receive a doctoral degree (Ph.D.) in psychology. He opened the first psychology laboratory in the United States and was the first American Psychological Association (APA) president.
- Mary Whiton Calkins was the first woman to qualify for a Ph.D. in psychology and was elected president of the APA in 1905.
- Margaret Floy Washburn was the first woman to receive a Ph.D. in psychology.
- Francis Cecil Sumner was the first African-American to receive a Ph.D. in psychology.
- Inez Beverly Prosser was the first African-American woman to earn a Ph.D. in psychology.
- Kenneth Clark and Mamie Phipps Clark were educational psychologists whose research was used during the *Brown v. Board of Education* Supreme Court case.

Apply What You Know

7. Kenneth and Mamie Phipps Clark's work, which showed that African-American children attending a segregated school often viewed "white" as _____, was used in the *Brown v. Board of Education* case that overturned _____.
8. Harvard University did not award Mary Whiton Calkins a doctoral degree, though she completed the requirements, because _____.

Six Psychological Perspectives

WHAT'S THE POINT?

1-5 How do six psychological theories explain thinking and behavior?

- Psychological perspectives describe the ways in which psychologists view thinking and behavior. Many historical theories were forerunners to one or more modern perspectives.
- Psychological perspectives include the psychodynamic, behavioral, humanistic, cognitive, biological, and social-cultural perspectives.
- Psychodynamic psychologists focus on how our behavior springs from unconscious drives and conflicts.
- Behavioral psychologists believe we learn responses through rewards, punishments, and observation.
- Humanistic psychologists focus on how healthy people strive to reach their full potential.
- The cognitive perspective focuses on how people think—how they take in, process, store, and retrieve information.
- The biological perspective focuses on physical structures and substances underlying a particular behavior, thought, or emotion.
- The social-cultural perspective focuses on how thinking or behavior changes in different situations or as a result of cultural influences.

Apply What You Know

9. A psychologist from which psychological perspective would be most likely to agree that thinking and behavior are caused by combinations of hormone and neurotransmitter activity in the brain?
- cognitive
 - social-cultural
 - biological
 - behavioral
10. A psychologist from which psychological perspective would be most likely to agree that people act in the ways they do because of rewards and punishments?
- | | |
|--------------------|---------------|
| a. social-cultural | c. cognitive |
| b. biological | d. behavioral |

Using the Test Bank

The **Test Bank** that accompanies this textbook offers a wide variety of questions in different formats and levels of complexity. Use the software to construct whole tests or to integrate standardized questions into teacher-made tests.

Answers Psychology's American Groundbreakers: Apply What You Know

- good and pretty, segregation in schools
- she was a woman

Answers Six Psychological Perspectives: Apply What You Know

- (c)
- (d)

Answers Psychology in the Twenty-First Century: Apply What You Know

11. (c)
12. (a)

Psychology in the Twenty-First Century



WHAT'S THE POINT?

1-6 What are the basic ideas behind three of psychology's developing areas?

- Behavior genetics focuses on how much our genes and environment influence our individual differences (a combination of biology and behaviorism).
- Evolutionary psychology focuses on behaviors that helped our ancestors survive and combines biological, psychological, and social theories of human behavior.
- Positive psychology focuses on the study of optimal human functioning and the factors that allow individuals and communities to thrive.

Apply What You Know

11. Which psychological perspective is most directly interested in factors such as wellness and human thriving?
- the psychodynamic perspective
 - behavior genetics
 - positive psychology
 - evolutionary psychology
12. Which psychological perspective is most directly interested in how genes and experiences combine to form personalities?
- behavior genetics
 - the humanistic perspective
 - the psychodynamic perspective
 - positive psychology

KEY TERMS AND KEY PEOPLE

psychology, p. 5
basic research, p. 5
applied research, p. 5
structuralism, p. 7
Gestalt [gih-SHTALT]
psychology, p. 7
functionalism, p. 8
psychoanalysis, p. 9
behaviorism, p. 10
humanistic psychology, p. 10
cognitive perspective, p. 15

biological perspective, p. 15
social-cultural perspective, p. 15
behavior genetics, p. 16
evolutionary psychology, p. 17
positive psychology, p. 17
Wilhelm Wundt [VOONT]
(1832–1920), p. 6
Edward B. Titchener (1867–
1927), p. 7
William James (1842–1910), p. 8
Sigmund Freud (1856–1939), p. 9

Ivan Pavlov (1849–1936), p. 9
John B. Watson (1878–1958),
p. 10
B. F. Skinner (1904–1990), p. 10
Abraham Maslow (1908–1970),
p. 10
Carl Rogers (1902–1987), p. 10
Jean Piaget [pee-ah-ZHAY]
(1896–1980), p. 11
Kenneth Clark (1914–2005) and
Mamie Phipps Clark (1917–
1983), p. 13