ACTIVITY 1

A Career in Psychology

Students should be asked to review at least one of the following resources, select a career path in psychology that interests them or is one they would like to know more about, and write a short essay on the job prospect. The paper should include descriptions of the job prospect or career and the educational and other requirements for pursuing this line of work or research, and should provide other relevant information about the job prospect (e.g., average salary, if known; growth potential in the field). Students should also include a brief biography of someone working in the chosen line of work.

Here are resources students can use:

- Appendix E of the APA Guidelines for the Undergraduate Psychology Major: Version 2.0 (APA, 2013), which provides a roster of job prospects for psychology graduates.
- Dr. Drew Appleby's online career-exploration resource for psychology majors, which contains more than 2,000 websites that psychology majors can use to explore 285 careers—some of which can be entered with a bachelor's degree and some that require a graduate degree.
- APA Science in Action website, which highlights different careers in psychology.
- Interesting Careers in Psychological Science Series, from the APA Science Directorate, which profiles psychologists in non-academic careers.
ACTIVITY 3

How Psychology Benefits Society

The mission of the American Psychological Association is to advance the creation, communication, and application of psychological knowledge to benefit society and improve people's lives.

Ask students to consider how psychology benefits society and improves people's lives by addressing domestic and global issues. Students should:

- Select one important issue facing society (e.g., global warming, terrorism, violence, bullying).
- Create either a blog post (350–750 words), a newsletter article, a poster, or a script for a podcast or television commercial describing the issue and at least one research study in psychology that has addressed the issue.
- Develop a statement of how psychology can benefit society and improve people's lives regarding the issue.
- Be encouraged to consider both applied and nonapplied basic research here, since building the knowledge base of psychology (e.g., through nonapplied basic research) is an important contribution to society as well.
Using Psychological Perspectives to Answer Questions on Behavior

This activity aligns with the National Standards for High School Psychology Curricula Scientific Inquiry Domain, Content Standard 1: Development of psychology as an empirical science, Performance Standard: 1.3 Describe perspectives employed to understand behavior and mental processes.

This activity encourages discussion of the various psychological perspectives and the views they bring to bear upon questions about behavior. For each of the following statements, ask students to indicate with which psychological perspective they would be most likely to agree: Psychodynamic (P), Behavioral (B), Behavior Genetics (BG), Evolutionary (E), Cognitive (C), Sociocultural (S), Neuroscience (N), or Humanistic-Existential (HE).

Although each of the statements is keyed to one of these perspectives, it is important to realize that events in the real world are often complex, and students may be able to make good arguments for more than a single perspective in some cases. And of course these statements are only examples; you (or your students) could easily generate additional statements to contribute to the discussion.
The statements:

- The mind can be viewed as an information processing system.
- Behavior is motivated by forces that individuals may not understand or be aware of.
- Human thought and behavior can be understood in terms of activity at the neural level.
- One limitation of our understanding of behavior is that most research has been conducted on subjects from North America.
- Psychological science is the study of behavior that is observable and measurable.
- Personality is attributable more to genes than to environmental experience.
- Many of our behaviors have developed as a result of our species' adaptation to the challenges of surviving across millennia.
- Future behavior is influenced by memory and analysis of past experience.
- Pain tolerance is largely a result of the effects of endorphins and other neurochemicals.
- Pain tolerance is influenced by expectancies and interpretation of experiences.
- Behavior is powerfully influenced by its consequences, in the form of reinforcement and punishment.
- Behavior may be the product of unconscious conflict and anxiety.
- Basic facial expressions of emotion are universal across many cultures.
- Identical twins tend to have similar levels of intelligence, even when separated early in life.
- Women around the world tend to choose older mates who will be good providers.
- Behavior is motivated by self-actualization and the promise of human potential.
Facebook Activity

Developed by

**Jenn Schlechtweg**
Ridgefield High School, CT

This activity aligns with the *National Standards for High School Psychology Curricula* Scientific Inquiry Domain, Content Standard 1: Development of psychology as an empirical science, Performance Standard 1.2: Describe the emergence of psychology as a scientific discipline.

**Background**

Facebook is a free social networking website that is unique to your generation. According to Wikipedia (another product of your generation), “users can join networks organized by city, workplace, school, and region to connect and interact with other people. People can also add friends and send them messages, and update their personal profiles to notify friends about themselves.” What would it have been like if some of the most famous psychologists in history had a Facebook page?

**Task**

1. You will be assigned one psychologist from the history unit.

2. You will make a hardcopy of a Facebook page for that psychologist! (Large paper will be handed out; you will probably need to manually cut and paste images/text onto the paper.)

3. You will also complete preparation work so you will be able to critique other psychologists on their “wall.” **Wall writing will occur during class.**

4. Follow the directions below and get started!
STEP I: Assignment

Directions: Please circle the major historical figure you were assigned.

Rene Descartes  John Locke  Wilhelm Wundt
Max Wertheimer  G. Stanley Hall  Francis Cecil Sumner
Edward B. Titchener  Charles Darwin  William James
Margaret Floy Washburn  Mary Whiton Calkins  Sigmund Freud
Dorthea Dix  Ivan Pavlov  John B. Watson
E.F. Skinner  Abraham Maslow  Carl Rogers
Paul Broca  Carl Wernicke  Jean Piaget
Roger Sperry

STEP II: What should be on my page?

1. Profile picture

2. General information
   a. Name, location, date of birth, date of death
   b. Education history
   c. Work history
   d. "About Me" section: Two paragraphs describing who this person is and an explanation of their most significant contributions to the field of psychology. Underline and define all key vocabulary terms.

3. Network (two networks)
   a. In which historical or modern theoretical approach does this person's work most closely fit (e.g., structuralism, functionalism, behaviorism, gestalt, psychoanalytic, humanistic, evolutionary, biological, cognitive, biopsychosocial)?
   b. Explain why this person's work falls into this approach.
4. Groups
Make up AT LEAST THREE groups that your psychologist would join.

a. Write one group message to your members consisting of a short explanation of what the groups are and what the title means.

b. Be sure to specifically connect the group to the historical figure and the figure's work.

5. Status Update
Create a clever status update describing what the historical figure would most likely be doing at any given time.

6. Check-in

a. Choose a minimum of two.

b. What places (restaurants, stores, buildings, etc.) would the historical figure have checked into? Include a picture, who they were with, and what they were doing. Be sure to specifically connect your choices to the historical figure and their work.

7. Friends

a. Include a minimum of six historical friends.

b. Be sure they have a good reason to be friends. They could have attended the same university or have views from similar psychological perspectives. Include one sentence explaining why they are friends.

8. You decide!
Add one more Facebook element for your psychologist that is not a requirement.

a. Example: Include a picture or graph related to their research.

b. Include an explanation of what the element is and how it relates to your historical figure.
Facebook Page of

Education
Lives in
From
Work
About

Name

Education
Lives in
From
Work
About

Photos
Likes
App 1 Name
App 2 Name

Post
Photo
Write something...

Current Event

Like · Comment · Share

0,000 people like this.

View all 000 comments
Write a comment...

What's on your mind?

Like

Activity
Recent

Friends

Set All

000
Psychology Goes to Madison Avenue

Developed by

Steve Jones
City of Medicine Academy, NC

This activity aligns with the National Standards for High School Psychology Curricula Scientific Inquiry Domain, Content Standard 2: Major subfields within psychology. Performance Standard 1.2: Describe the emergence of psychology as a scientific discipline.

Give students the following instructions:

Imagine you are a famous figure in the field of psychological science and that, in addition to teaching and conducting your research, you have decided to open a business based on your work. Your job is to choose one of the following psychologists, do research to learn more about his/her contributions to psychology, and then create a business that illustrates the psychologist's perspective.

For example, if you were to choose B. F. Skinner, you might create a business emphasizing his work with animals in creating his form of behaviorism, based on operant conditioning. You might define the business like this:

Skinner’s Pet Peeves
We offer training for animals using positive reinforcement.
Specializing in rats and pigeons
Psychologists you could choose from:

Ivan Pavlov    John B. Watson    Sigmund Freud
Carl Rogers    Abraham Maslow    Jean Piaget
Carl Jung      Erik Erikson     Albert Bandura
Stanley Milgram Solomon Asch    Philip Zimbardo

In addition to the business name, you will need to create:

- a business logo
- an advertisement (TV, online, radio, or print)
- a pamphlet that touts what your business offers (please include any specific psychological terminology as relevant)
Statistical Significance

Allyson J. Weseley, EdD
Roslyn High School, Roslyn Heights, NY

One of the hardest concepts for students to grasp is the meaning of a statistically significant difference. A statistically significant difference is unlikely to be due to chance. Three factors contribute to whether a difference between groups will be statistically significant:

- the size of the difference between the group means
- the size of the sample
- the variance within the groups

While all three of these factors are reasonably intuitive, the third is more complicated.

After introducing students to the idea that a statistically significant difference is one that is unlikely to be due to chance, try the following exercise. Divide students into groups to read the example below and formulate an answer. Then, discuss the answers as a full class and try to draw out the answers to the discussion questions below.

Example
Melissa is running a study to see if girls and boys average different amounts of participation in classrooms. She hypothesizes that girls participate more than boys and plans to observe students in various classes and record how often they raise their hands to answer the teachers' questions.

1. For the first part of her data collection, Melissa selects two boys and two girls to study. She finds that the girls raise their hands an average of 4.7 times per week while the boys only raise their hands an average of 1.3 times in the same classes. Do you think this difference is likely to be statistically significant? Why or why not?
2. Next, Melissa expands her study to observe 50 boys and 50 girls. She finds that girls raise their hands an average of 3.1 times per week and boys raise their hands an average of 3.0 times per week in their social studies classes. Do you think this difference is likely to be statistically significant? Why or why not?

3. In a third data collection, Melissa studies another 50 boys and another 50 girls. This time, she finds that girls raise their hands an average of 3.2 times per week and boys only raise their hands an average of 2.4 times in their math classes. However, a closer look at her data reveals that there is tremendous variability between the participation of the students. Some students—both boys and girls—never raise their hands while others—again both boys and girls—raise their hands more than 15 times per week. How do you think this last factor—the variability in responses—affects the likelihood of the difference between girls' and boys' participation to be statistically significant?

Discussion Questions
1. Why does the small sample size in the first example increase the likelihood that Melissa's results are due to chance?

2. Why does the small difference between boys and girls in the second example increase the likelihood that Melissa's results are due to chance?

3. Why does greater variability among students' responses increase the likelihood that Melissa's results are due to chance?

4. Based on the data described above, what should Melissa conclude about her experimental hypothesis?

5. As a researcher, which of the three factors that influence statistical significance can you most directly influence?
Research Ethics

Allyson J. Weseley, EdD
Roslyn High School, Roslyn Heights, NY

All research involves ethical considerations. Such concerns do not mean that the research is unethical but rather that the researcher must do whatever she or he can to minimize ethical risks. Institutional review boards (IRBs) look over research proposals to safeguard participants and researchers. There are few hard-and-fast rules about what is and is not acceptable. IRBs generally engage in a kind of cost–benefit analysis.

Common ethical concerns include:

1. Informed consent
   - People should not be forced to be into research.
   - People have the right to withdraw from the research at any time with no penalty.
   - There should be informed consent. If deception is involved, there should be a debriefing.
   - To consent, people must be told something about the purpose of the research.

2. Anonymity/confidentiality
   - The source of the data should be anonymous or kept confidential to protect people's privacy.

3. Long-term harm
   - While it is acceptable to cause people minor discomfort during the research, no lasting physical or psychological harm should result from their participation.
Instructions
Imagine you have been assigned the task of sitting on an Institutional review board (IRB) and have been asked to consider the following research proposals. Each proposal involves ethical issues. Read each proposal and answer the questions below.

Proposal One
Tyrone wants to study the impact of watching sexually suggestive/explicit television on people’s attitudes toward sex. He plans to test ninth graders because he believes they are still young enough to be highly impressionable. He will solicit volunteers to come after school. Half will be assigned to watch one hour of sexually explicit clips from a cable TV show while the other half will view an hour of clips from the same show that deal with nonsexual topics. After watching the TV shows, all participants will fill out a questionnaire about the attitudes toward sex.

Questions:
What additional information might you want to know about the study in order to decide whether or not it should be approved?

What are the benefits that might result from this research? What are the potential harms?

If you were on an IRB reviewing this proposal, what would your recommendation be?

Proposal Two
Priya is interested in whether listening to music while working out makes people exercise harder. She plans to ask college students to come to the gym and run on a treadmill for half an hour either while listening to music or in silence. The dependent measure will be the number of miles run in that time period.
Questions:
What additional information might you want to know about the study in order to decide whether or not it should be approved?

What are the benefits that might result from this research? What are the potential harms?

If you were on an IRB reviewing this proposal, what would your recommendation be?

Proposal Three
Charlotte wants to research the effect of labeling students (gifted vs. struggling) on their achievement in second grade. She proposes that students in an elementary school's second grade be divided into reading groups in which ability levels (as determined by previous test scores) are evenly mixed. One group will be told they are gifted readers, another group will be told that they are struggling readers, and a third group will be told nothing at all. Charlotte theorizes that by the end of the second-grade year, the students in the "gifted" level group will outperform those in the "struggling" group on the same reading test.

Questions:
What additional information might you want to know about the study in order to decide whether or not it should be approved?

What are the benefits that might result from this research? What are the potential harms?

If you were on an IRB reviewing this proposal, what would your recommendation be?
Sampling or Assignment?

Allyson J. Weseley, EdD
Roslyn High School, Roslyn Heights, NY

Sampling is when researchers select a group to study. While the word can apply to anything a researcher is studying (e.g., plants, animals), for the purpose of this exercise, we will assume we are talking about psychologists who are studying people. The word sample refers only to those people the researcher is studying.

Assignment, on the other hand, is the process by which researchers conducting an experiment decide which of their participants will be in each of the various treatment conditions. After picking their sample, experimenters must then assign the participants to conditions (e.g., experimental and control).

Students often confuse the terms "sampling" and "assignment." For each of the scenarios described below, indicate which process is being discussed and how you can tell.
1. Keith exposes half of his participants to an episode of a sitcom and half to an episode of a violent television show and then observes them for signs of aggressive behavior.

2. Laurie picks 100 people to be in her study on the effects of listening to music while studying.

3. Danny picks 100 students to try a new AP Psychology text and compares them with 100 other students who are using the old text.

4. Chris puts 20 children in a drumming class and contrasts their drumming abilities with 20 children who have not had any drum instruction.

5. Tracey chooses 1,000 people to be in her study about the personalities of youngest children.
Skills Assessment Worksheet

Transferable Skills generally are not associated with a particular job or task. Transferable skills are usually broader and related to leadership, communication, critical thinking, analysis, and organization. These are skills that can be transferred and utilized in a variety of different kinds of jobs and career paths.

Print the list of skills below and mark each column as described. You can have the same skill marked more than once in each column.

1. What skills have you already acquired and feel competent doing? In the first column, mark each skill in which you feel competent.
2. What skills do you enjoy, even if you are not proficient at them? In the second column, mark those skills that you really enjoy.
3. What skills would you like to learn, acquire or develop further?

<table>
<thead>
<tr>
<th>Skill</th>
<th>1. Feel Competent</th>
<th>2. Enjoy/Favorites</th>
<th>3. Would Like to Develop</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication Skills</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Write, edit, translate, interpret or critique words</td>
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<tr>
<td>Speak in public, debate, advocate, present or demonstrate an idea</td>
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<td>Facilitate a meeting</td>
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<td>Reading and following directions</td>
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<td>Comparing or cross-checking two lists</td>
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<td>Filling out forms</td>
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<td>Writing reports, letters and memos correctly</td>
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<tr>
<td>Reading and understanding policies and memos</td>
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<tr>
<td>Comfortably speaking to others you do not know</td>
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<tr>
<td>Taking notes while someone speaks</td>
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<td>Finding information</td>
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<tr>
<td>Using a map</td>
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<tr>
<td>Explaining things to other people</td>
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<tr>
<td>Know when to ask for help or more explanation</td>
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<td></td>
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<tr>
<td>Counsel or advise others</td>
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<tr>
<td>Listening to others</td>
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<td></td>
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<tr>
<td>Other(s):</td>
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A Molecule of Motivation, Dopamine Excels at Its Task

By NATAILIE ANGIER

If you’ve ever had a problem with rodents and woken up to find that mice had chewed their way through the Cheerios, the Famous Amos, three packages of Ramen noodles, and even that carton of baker’s yeast you had bought in a fit of “Ladies of the Canyon” wistfulness, you will appreciate just how freakish is the strain of laboratory mouse that lacks all motivation to eat.

The mouse is physically capable of eating. It still likes the taste of food. Put a kibble in its mouth, and it will chew and swallow, all the while wriggling its nose in apparent rodent satisfaction.

Yet left on its own, the mouse will not rouse itself for dinner. The mere thought of walking across the cage and lifting food pellets from the bowl fills it with overwhelming apathy. What is the point, really, of all this ingesting and excreting? Why bother? Days pass, the mouse doesn’t eat, it hardly moves, and within a couple of weeks, it has starved itself to death.

Behind the rodent’s fatal case of ennui is a severe deficit of dopamine, one of the essential signaling molecules in the brain. Dopamine has lately become quite fashionable, today’s “it” neurotransmitter, just as serotonin was “it” in the Prozac-laced ’90s.

People talk of getting their “dopamine rush” from chocolate, music, the stock market, the BlackBerry buzz on the thigh — anything that imparts a small, pleasurable thrill. Familiar agents of vice like cocaine, methamphetamine, alcohol and nicotine are known to stimulate the brain’s dopamine circuits, as do increasingly popular stimulants like Adderall and Ritalin.

In the communal imagination, dopamine is about rewards, and feeling good, and wanting to feel good again, and if you don’t watch out, you’ll be hooked, a slave to the pleasure lines cruising through your brain. Hey, why do you think they call it dopamine?

Yet as new research on dopamine-deficient mice and other studies reveal, the image of dopamine as our little Bacchus in the brain is misleading, just as was the previous caricature of serotonin as a neural happy face.

In the emerging view, discussed in part at the Society for Neuroscience meeting last week in Chicago, dopamine is less about pleasure and reward than about drive and motivation, about figuring out what you have to do to survive and then doing it. “When you can’t breathe, and you’re gasping for air, would you call that pleasurable?” said Nora D. Volkow, a dopamine researcher and director of the National Institute on Drug Abuse. “Or when you’re so hungry that you eat something disgusting, is that pleasurable?”

In both responses, Dr. Volkow said, the gasping for oxygen and the wolfing down of something you would ordinarily spurn, the dopamine pathways of the brain are at full throttle. “The whole brain is of one mindset,” she said. “The intense drive to get you out of a state of deprivation and keep you alive.”

Dopamine is also part of the brain’s salience filter, its get-a-load-of-this device. “You can’t pay attention to everything, but you want to be adept as an organism at recognizing things that are novel,” Dr. Volkow said. “You might not notice a fly in the room, but if that fly was fluorescent, your dopamine cells would fire.”
In addition, our dopamine-driven salience detector will focus on familiar objects that we have imbued with high value, both positive and negative: objects we want and objects we fear. If we love chocolate, our dopamine neurons will most likely start to fire at the sight of a pert little chocolate bean lying on the counter. But if we fear cockroaches, those same neurons may fire even harder when we notice that the “bean” has six legs. The pleasurable taste of chocolate per se, however, or the anxiety of cockroach phobia, may well be the handiwork of other signaling molecules, like opiates or stress hormones. Dopamine simply makes a relevant object almost impossible to ignore.

Should the brain want to ignore what it might otherwise notice, dopamine must be muzzled. Reporting recently in Nature Neuroscience, Regina M. Sullivan of New York University Medical Center, Gordon A. Barr of Children’s Hospital of Philadelphia and their colleagues found that, whereas rats older than 12 days would quickly develop an aversion to any odors that were paired with a mild electric shock, young rats would perversely show a preference for such odors if their mothers were nearby when the tutorial jolt was delivered. The researchers traced that infantile Candide spirit to a suppression of dopamine activity in the amygdala, where fear memories are born. Infantile rats know their mother by smell, Dr. Sullivan explained, and they must not learn to avoid her, for even an abusive caretaker is better than none.

Large as its impact may be, dopamine is a compact molecule, built of 22 atoms, with the characteristic nitrogenous amine knob at one end. (Dopamine, by the way, takes its name from its chemical composition, and has nothing to do with the word dope — as in heroin or other recreational drugs — which is thought to derive from the Dutch term for stew.)

The dopamine production corps is tiny as well. Fewer than 1 percent of all neurons generate the neurotransmitter, most of them in midbrain structures like the substantia nigra, which helps control movement; it is the degradation of this population of dopamine cells that results in the tremors and other symptoms of Parkinson’s disease.

There is also dopamine activity higher up, in the prefrontal cortex parked right behind the forehead, that great executive brain where storylines are written, impulses controlled and excuses contrived. An impoverishment of prefrontal dopamine is thought to contribute to schizophrenia.

Wherever their station, brain cells respond to the release of dopamine through one or more of five distinct dopamine receptors poking up from their surface, proteins designed to lock onto dopamine and respond accordingly. Another key player is the dopamine transporter, a kind of janitor that picks up used dopamine molecules and sweeps them back into the cells where they were born. Recreational drugs like cocaine tend to block that transporter, allowing dopamine to linger in the neuronal vestibule and keep punching its signal along.

People differ from one another at every juncture of the dopamine matrix, in the tonal background pace at which their dopamine neurons rhythmically fire, the avidity with which the cells spike in response to need or news, and the ease with which hyperstimulated cells revert to baseline.

Some researchers have looked at genetic variations in receptor types for clues to personality differences. According to Dan T. A. Eisenberg of Northwestern University, scientists have detected a modest connection between a relatively elongated version of dopamine receptor No. 4 and a tendency toward impulsivity and risk-taking behavior, particularly financial risk-taking.

One can’t make too much of these preliminary correlations in behavioral genetics, but maybe before the next bailout, we should demand that bankers be tested for the presence of risky, long-form receptors. It’s the economy, dopamine.

1. How does dopamine affect a mouse?
2. How are we affected by dopamine?
3. How can we use this knowledge to “train our brain" and improve our habits?