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TRAVELING PSYCHOLOGY FAIR: LEARNER-CENTERED OUTREACH ACTIVITIES TO STIMULATE INTEREST IN PSYCHOLOGY

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Overview

The Traveling Psychology Fair is designed to bridge the gap between secondary and college psychology education, encourage enthusiasm for the study of psychology, enhance teaching resources for high school psychology instructors, and promote a deeper understanding of psychological principles for psychology majors. Consisting of 24 outreach activities, grouped into 12 categories, the Traveling Psychology Fair enlivens the teaching and learning of introductory psychology concepts by engaging undergraduate psychology majors in the facilitation of interactive, learner-centered activities for high school psychology students.

Outline of Contents

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Introduction

To foster a greater understanding of the diverse field of psychology, a Traveling Psychology Fair was created with the primary aim of stimulating interest in psychology among high school students and promoting service learning in undergraduate psychology majors. The goals of the Traveling Psychology Fair were to:

- strengthen a seamless educational experience between local high schools, community colleges, and traditional universities;
- foster a working relationship between psychology faculty and local high school psychology teachers;
- provide college-level psychology students the opportunity to gain professional presentation and educational outreach experience as they deepen their understanding of basic psychological concepts;
- implement a form of service learning that will allow college-level psychology students the opportunity to adopt the social role of a psychology instructor;
- introduce high school psychology teachers to a range of novel demonstrations and activities to enhance their teaching repertoire; and
- encourage enthusiasm in the study of psychology for both high school and college students.

Most psychology fairs are hosted at a centralized location in which high-school psychology students must travel to the fair site to view presentations and activities. The time-intensive nature of hosting this type of educational fair mandates that many schools/students are invited to participate in order to offset monetary and time investments. Despite the natural educational gains available through exposure to novel psychological information, the scale of a typical psychology fairs limits the individualized interactions or hands-on experiences of each student. In contrast to this traditional approach, the Traveling Psychology Fair is a mobile instructional model that transports the psychology experience to the individual high schools. As such, it creates a more personalized, individual forum for student interaction with engaging activities that promote learner-centered interaction focusing on key concepts in psychology.

Key to the success of the Traveling Psychology Fair is the use of undergraduate psychology majors as the facilitators and leaders of the outreach fair activities. The use of undergraduate students as leaders allowed for more one-on-one interaction with high school students than is available when outreach activities are presented by a limited number of faculty members. Although the greatest benefit rests with the educational opportunities for high school students, the Traveling Psychology Fair also provides a unique opportunity for college-level psychology students to gain valuable service learning experience. In addition to enhancing their own knowledge of psychology through the preparation of their outreach activities, undergraduate students are able to share their enthusiasm of psychology while increasing their involvement in the larger discipline.

Implementing a Traveling Psychology Fair

Originally, the vision of the Traveling Psychology Fair was to delegate undergraduate students to create and manage fair activities as a component of their involvement in Psychology Club and/or Psi Chi. Experience quickly revealed that most psychology students had extreme difficulty creating appropriate and effective outreach demonstrations. As a result, it was more effective and efficient to have faculty serve as coordinators to schedule, create and oversee outreach presentations while the undergraduate students facilitated the fair activities. Feedback

from high school psychology instructors indicated that the high school students were particularly engaged by the novelty of having college students present the activities. One of the most important outcomes of the Traveling Psychology Fair experience is the realization that psychology is exciting and engaging. By involving undergraduate students in presenting the outreach activities, enthusiasm for the discipline is passed to the next generation to ensure ongoing interest in the field of psychology.

The diverse range of issues in psychology provides a wealth of potential topics for psychology fair activities. The following outreach activities proved to be engaging, effective Traveling Psychology Fair presentations:

History and Critical Thinking

- An Interactive Timeline of the History of Psychology
- Critical Thinking with *MindTrap*

Neuroscience

- Phrenology and the Localization of Brain Functioning
- Using the Energy Ball to Explain Neural Conduction
- The Brain: Watch It Wiggle!

Human Development

- Developing the Cognitive Ability of Conservation
- Concept Formation

Sensation and Perception

- Am I Seeing Straight? Perceptual Adaptation and Distortion Goggles
- The Stroop Task

Consciousness

- Finger Twirling is So Easy!
- Selective Attention: Are You Picking Up What I am Laying Down?

Learning

- Using Operant Conditioning to Shape a Novel Behavior
- Response Rates as a Function of Reinforcement Schedules

Memory

- Demonstrating the Capacity of Short-Term Memory
- Tying Your Shoe is Difficult

Cognition and Intelligence

- From Point A to Point B: Using Our Cognitive Maps
- Multiple Intelligences

Emotion

- Identifying Emotion as a Function of Facial Expression

Personality

- Evaluating the Accuracy of Personality Profiles: The Barnum Effect
- Projective Tests and Kokology

Psychological Disorders and Treatment

- Stigma of Mental Illness in the Movies
- Using ELIZA to Demonstrate Client-Centered Therapy

Social Psychology

- Personal Space Requirements
- Internalization of Gender Roles and Expectations

Outreach Activities

The following pages provide complete descriptions of outreach activities. Each entry summarizes the purpose, materials, costs, time requirements, procedures, tips for engaging students, and suggested readings/websites.

An Interactive Timeline of the History of Psychology
(HISTORY AND CRITICAL THINKING)

Purpose

The goal of this activity is to identify and understand theoretical trends in the history of psychology from early philosophers to modern researchers.

Upon completion of this activity, students will be able to:

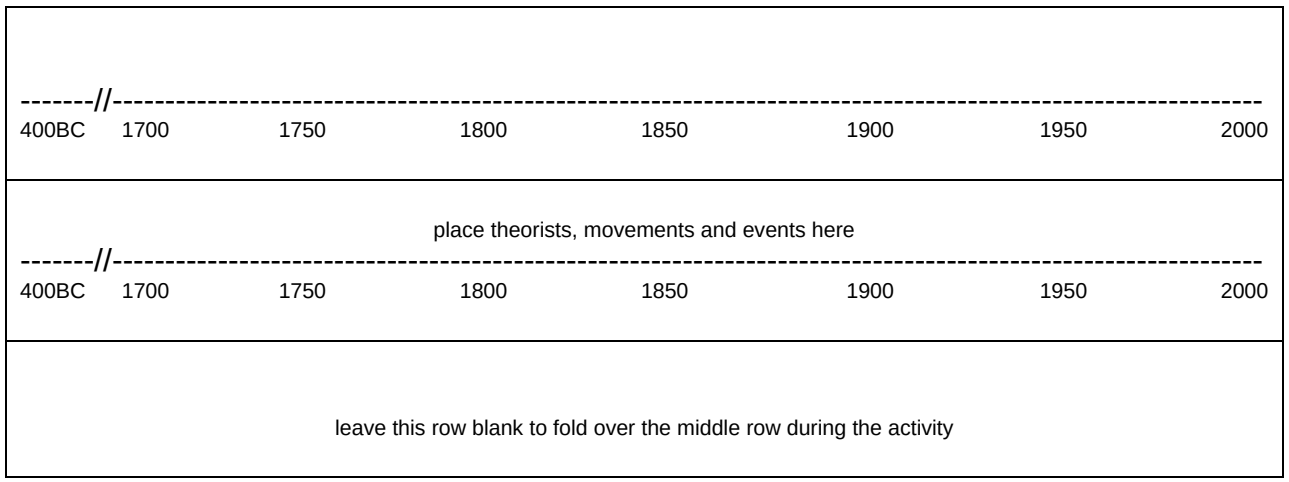
1. Understand the progression of psychology as a science;
2. Identify key theorists in the history of psychology;
3. Chronologically list the theoretical movements in psychology; and
4. Understand the social and political contexts that influenced the development of psychological theories.

Materials Needed

- 3'x6' sheet of banner paper
- 30 3"x5" index cards
- reusable tacky putty or tape
- marker(s)
- access to a lamination machine

Generate a list of important theorists, movements, or events throughout the history of psychology. For each item, print it in large type on an individual index card; laminate the completed index cards.

Fold the banner lengthwise into three rows. In the top row, draw a horizontal line the length of the entire row. Use this line as the basis of your timeline and place dates (years) from 400 BC to the present. To accommodate the lengthy history of psychology without wasting excessive space, you will want to include breaks in the timeline to indicate lapses in time. For example:



In the middle row, write each of the theorists, movements, and events (using the same list generated earlier) in correct chronological order on the timeline. The third row is left blank; this row is used to fold over the middle row to hide the correct answers while students are completing the activity. Laminate the entire banner.

Estimated Costs

- *Initial:* $5-$10 for paper, lamination, and tacky putty or tape
- *Ongoing:* $0

Time Required

- *Preparation:* Allow approximately 2 hours to prepare this activity for the first time. Once timeline banner and theorist/movement/event cards have been created, there is no ongoing preparation time.
- *Presentation:* This hands-on activity can be completed in approximately 5-10 minutes.

Procedure

Hang the banner lengthwise on the wall and fold the third row up/over the middle row hiding the completed timeline. The top row containing the line with dates should still be visible. Arrange the theorist/movement/event cards in random order and distribute to the students.

Students may work either alone or in a small group to complete the activity. Using only their current knowledge of psychology, instruct students to stick the theorist/movement/event cards on the timeline in chronological order using the tacky putty or tape. Once all students have placed the theorist/movement/event cards on the timeline, reveal the correct order.

Possible discussion topics include:

- The roots of psychology in philosophy and science
- The relationship between social, political factors and psychological theory
- The cumulative building of theoretical ideas
- Major events or breakthroughs in our understanding of psychology

Tips for Engaging Students

The timeline activity is most effective when it includes a combination of recognizable theorists and social or political events. In this way, students can use their understanding of major historical events as a basis from which to anchor progress in psychology.

Suggested Readings

- Today in the History of Psychology (http://www.cwu.edu/~warren/today.html)
- Oklahoma State Psychology Museum and Resource Center (http://psychology.okstate.edu/museum/history/)
- AllPsych Online (http://allpsych.com/timeline.html)
- History of Psychology Links (http://www.socialpsychology.org/history.htm)

Critical Thinking with *MindTrap*
(HISTORY AND CRITICAL THINKING)

Purpose

The purpose of this activity is to demonstrate principles of critical thinking by using a popular game entitled *MindTrap.*

Upon completion of this activity, students will be able to:

1. Describe the concept of critical thinking; and
2. Describe the process of brainstorming.

Materials Needed

- Pressman Toy Corporation game of *MindTrap* (available for purchase at www.amazon.com)

Estimated Costs

- *Initial:* $24.99 for the *MindTrap* game
- *Ongoing:* $0

Time Required

- *Preparation:* Allot five minutes to pre-select short questions from the *MindTrap* game.
- *Presentation:* The time required depends on the number of questions posed.

Procedure

Provide a basic definition of critical thinking and note that critical thinking can be developed through practice. Then model the brainstorming process, using a simple *MindTrap* question with accompanying narrative. Continue presenting the remaining *MindTrap* questions.

Possible discussion questions include:

- How did you solve the questions?
- Did the solutions come faster to you over the number of trials?
- Create your own *MindTrap* question.
- How will answering these questions impact your problem solving?
- What would happen if you saw these questions again?

Tips for Effectively Engaging Students

There may be considerable time differences in solving the questions. Please advise students not to blurt out the answer. Be sure to emphasize that solving the question is more important than speed. If there are a number of students who have not solved the question, work through it together as a group. This process can introduce strategies and tips that other students may adopt. Many questions are so flexible that they can be used effectively as transitions between other activities.

Phrenology and the Localization of Brain Functioning
(NEUROSCIENCE)

Purpose

The goal of this activity is to demonstrate the relationship between early conceptualizations of the role of the brain in human behavior and our modern understanding about the localization of brain functioning.

Upon completion of this activity, students will be able to:

1. Understand the role of phrenology in early conceptualizations of brain functioning;
2. Identify the lobes of the brain; and
3. Identify key brain structures responsible for various aspects of human thought, emotion, and behavior.

Materials Needed

- 2 phrenology busts (available for purchase at Lawless Hardware, www.dlawlesshardware.com/porphrenhead.html or Ebay, www.ebay.com)
- beige spray paint
- paint markers

Spray paint one phrenology bust a solid beige color. Once the bust has dried, use the paint markers to draw the lobes of the brain and other relevant brain structures. In addition, it is helpful to include the general function of the brain structures.

Estimated Costs

- *Initial:* $80 for phrenology busts, paint and markers
- *Ongoing:* $0

Time Required

- *Preparation:* Allow approximately 1 hour to prepare this activity for the first time (in addition to the preparation time, you will need 24-48 hours to allow paint to dry). you will need to allow time for the paint to dry). Once the activity has been created, there is no ongoing preparation time.
- *Presentation:* This hands-on activity can be completed in approximately 10 minutes.

Procedure

Display the original phrenology bust alongside the bust painted with current brain structures. Encourage students to compare the two busts. While students examine similarities and differences in the understanding of brain functioning as illustrated by the two busts, discuss phrenology as a precursor to modern neuroscience.

Possible discussion questions include:

- To what extent was the original phrenology identification of brain functioning correct?
- How did phrenology as a science contribute to the development of our current understanding of the localization of brain functioning?
- What happens when we damage a structure of the brain? Is that ability lost or do other brain structures compensate?
- What techniques are currently used to monitor brain functioning?

Tips for Effectively Engaging Students

One way to approach the discussion of the localization of brain functioning is to introduce phrenology and explain the various brain functions according to this model. Then, encourage students to feel their own heads and see if their bumps correspond to their own traits or abilities. This often leads to an interesting discussion about phrenology's accuracy in predicting personality or performance. As students discuss the validity of phrenology, you can introduce the bust illustrating the modern understanding of the lobes and structures of the brain.

Suggested Readings

- Psychological Science: The Mind, Brain, and Behavior (http://www.wwnorton.com/psychsci/ch4_overview.htm)
- Brain Structures and Their Functions (http://serendip.brynmawr.edu/bb/kinser/Structure1.html)
- The History of Phrenology (http://www.victorianweb.org/science/phrenology/terms.html)

Using the Energy Ball to Explain Neural Conduction
(NEUROSCIENCE)

Purpose

The purpose of this activity is to demonstrate the electrical component of neural transmission by using an energy ball.

Upon completion of this activity, students will be able to:

1. Describe an action-potential in neural conduction;
2. Apply the concept of chains of students connected to the ping-pong ball to neural chains; and
3. Apply the concept of electrical circuits to neural transmission.

Materials Needed

- Energy Ball (available for purchase at www.sciplus.com)

The energy ball is an electronically modified ping-pong ball that features two metal contact strips on the exterior of the ball. When both metal contacts are touched and a circuit is complete, sounds and a blinking light will emanate from the ping-pong ball.

Estimated Costs

- *Initial:* $4.95 for the Energy Ball
- *Ongoing:* $3.00 for replacement batteries for the Energy Ball

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 10 minutes.

Procedure

Introduce the two communication processes of the nervous system- one electrical and one chemical. This demonstration focuses on the electrical process of neural communication. Briefly explain that neural transmissions begin with a quick reversal of electrical charge along the axon of a nerve cell, known as an action potential. At this point, introduce the Energy Ball. Highlight the metal contact points and explain the role of circuits, or a completed chain. Begin the demonstration by touching one finger on each hand to each of the contacts on the Energy Ball; this will complete the circuit which displays the light and sounds. Now, ask for a student volunteer to help make a chain reaction. Hold hands with the student; while the instructor touches one finger to one of the contacts on the Energy Ball, the student uses their free hand to touch the other contact point. Again, a circuit is formed and the lights/sounds are activated. Add another person into the chain by holding hands and watch the result when the circuit is completed. Keep adding students by holding hands and observe the chaining effect. Explain that our nervous system is structured with chains of neurons communicating from one to another using electrical charges that release chemical messengers that communicate information from one neuron to the next.

Possible discussion questions include:

- Why are circuits so important for conducting electrical signals?
- What would happen if one of the units in the neural chain became damaged or did not work properly?
- Why were you not able to feel the electrical transmission when the Energy Ball was activated?

Tips for Effectively Engaging Students

This is an effective means of conveying the idea of electrical transmission. The best demonstrations utilize a chain of about 10 students; beyond that, students will break the chain too much and the intermittent activation of the Energy Ball will become distracting.

Suggested Readings

- Hanover College Psychology Department (http://psych.hanover.edu/Krantz/neurotut.html)

The Brain: Watch it Wiggle!
(NEUROSCIENCE)

Purpose

The purpose of this activity is to feature the brain and its properties to set the stage for neuroscience.

Upon completion of this activity, students will be able to:

1. Identify the major structures of the brain; and
2. Apply the gelatin brain to classical conditioning, more specifically, taste aversions and associations.

Materials Needed

- gelatin brain mold (available for purchase at www.mcphee.com)
- two boxes of peach gelatin
- plastic spoons
- paper napkins

Prepare the gelatin according to package directions and pour into the brain mold to set. Once set, release the gelatin brain onto a plate.

Estimated Costs

- *Initial:* $14 for brain mold, spoons, napkins and gelatin
- *Ongoing:* replacement of gelatin, plastic spoons, and napkins as supplies are diminished

Time Required

- *Preparation:* Allow three hours to prepare the gelatin and let it cool.
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

While displaying the gelatin brain point out the major cortical structures of the brain (i.e., lobes, cerebellum, and brainstem) and the functions of each. After completing this brief overview, take a spoon and eat a bite of the gelatin. Offer the students an opportunity to sample part of the brain. After students have an opportunity to taste-test the gelatin brain, discuss principles of classical conditioning and the associations created. Poll students to determine the number who would not want to sample some of the gelatin brain. Briefly discuss the power of association and its connection with classical conditioning.

Possible discussion questions include:

- Why would a person not want to sample some of the gelatin brain?
- What associations do you have with brains?
- What can be done to change a person's aversion to eating the gelatin brain?
- How can this information apply to other foods?

Tips for Effectively Engaging Students

One effective way of introducing the taste aversion perspective of this assignment is to offer students the opportunity to sample the gelatin brain using the facilitator's spoon. This is a great beginning to classical conditioning and associations. You may follow this up with a discussion of whose used spoon they would use.

Suggested Readings

- Hanover College Psychology Department (http://psych.hanover.edu/Krantz/neurotut.html)
- A Guided Tour of the Visible Human (http://www.madsci.org/~lynn/VH/tour.html)
- Visible Human Project Gallery (http://www.nlm.nih.gov/research/visible/visible_gallery.html)

Developing the Cognitive Ability of Conservation
(HUMAN DEVELOPMENT)

Purpose

The goal of this activity is to demonstrate an understanding of conservation with particular emphasis upon errors in cognitive functioning.

Upon completion of this activity, students will be able to:

1. Understand the development of conservation in children;
2. Identify errors in cognitive ability; and
3. Understand changes in cognitive ability over the lifespan.

Materials Needed

- tall, thin, transparent container (such as a vase or tall glass)
- short, wide, transparent container (such as a glass bowl or petri dish)
- small beads or BB gun pellets (enough to fill both containers)

Divide the beads or BB gun pellets in half and place equal numbers in each of the transparent containers.

Estimated Costs

- *Initial:* $10-$15 for containers and filler items
- *Ongoing:* $0

Time Required

- *Preparation:* Allow approximately a half hour to prepare this activity for the first time. Once the activity has been created, there is no ongoing preparation time.
- *Presentation:* This hands-on activity can be completed in approximately 5-10 minutes.

Procedure

Display both filled, transparent containers and ask students to guess the number of items contained in each. When all guesses are submitted, create a table or graph to display the average number of filler items predicted for each container. Reveal that the number of items in each container is identical and discuss possible reasons for differences in predictions. As you are reviewing reasons for differences in guesses, introduce the concept of conservation.

Possible discussion questions include:

- What factors did you pay attention to in making your guess?
- Do you think there would be differences in the accuracy of predictions for children, adults, or the elderly?
- At what point do children develop the ability to understand conservation?
- In real-life settings, can you think of examples in which we use conservation?
- How does cognitive ability change as we age?

Tips for Effectively Engaging Students

This activity is most effective if it is disguised as either a fun competition to win a prize or a demonstration on telepathy. Ideally, you want to draw students' attention away from a direct comparison between the two containers so that they are relying on a quick judgment. In this way, you are more likely to produce errors in which students judge the taller container as having more filler items.

Suggested Readings

- Piaget's Developmental Stages (http://coe.sdsu.edu/eet/Articles/piaget/index.htm)
- Jean Piaget's Theory of Cognitive Development (http://mi.essortment.com/jeanpiagettheo_rnrn.htm)

Concept Formation
(HUMAN DEVELOPMENT)

Purpose

The purpose of this activity is to demonstrate concept formation by presenting a group of students with the task of creating a representation of a novel object from verbal descriptions of a volunteer "teacher."

Upon completion of this activity, students will be able to:

1. Describe the process of concept formation;
2. Learn strategies and questions to develop a more accurate concept;
3. Apply the concept formation activity to the school age child in the classroom; and
4. Understand that individual differences in students may result in different representations of the object described.

Materials Needed

- a novel object
- box (large enough to block the novel object from the students)
- blank copy (one page per student)
- markers or colored pencils (enough for each student to have 2 or 3)

Be sure that the novel object is new to the students so that they will have to rely on the description of the object (bottom-up processing) to create their representation rather than using an already experienced or known object (top-down processing) to drive their representations.

Estimated Costs

- *Initial:* $0 - $20 for the novel object and the drawing materials
- *Ongoing:* vary according to the usage of initial supplies

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

Place the novel object inside the box and set in front of the class. Begin the activity by selecting a "teacher" from the class; this individual has the responsibility of verbally explaining the novel object to the rest of the students. The "teacher" is only allowed to study the object visually and may only use verbal descriptions; no gestures or motions are allowed. The "teacher" needs to keep the object out of the view of the rest of the class. The remainder of the class become "drawers;" these students are instructed to draw the object as best as possible. The "drawers" are allowed to ask the "teacher" questions concerning the object.

When the "drawers" have completed their representative drawings, display the representations, and compare them. Finally, show the class the object that was described.

Possible discussion questions include:

- For the "teacher": How easy was it to verbally describe the object? What strategies did you use to describe the object? How did you know that your 'students' understood what you were describing?
- For the "drawers": Was it easy to depict the object described? How well does your final representation match the actual object? How do you explain this? Which

descriptions were the most helpful in depicting the object? Which ones were not helpful? What did you do to resolve any confusion?

- How does an activity like this apply to school-age children who are learning a new concept in the classroom? What are the implications of this for teaching?

Tips for Effectively Engaging Students

The "teacher" in this activity plays a key role. Be sure that the "teacher" is taking the activity seriously and is able to provide good verbal descriptions of the object. Also, be sure that the "drawers" do not see the object before the end of the exercise.

Suggested Readings

- Gelman, R., & Williams, E. (1998). Enabling constraints for cognitive development and learning: Domain specificity and epigenesis. In D. Kuhn & R. S. Siegler (Eds.), *Handbook of child psychology (5th ed.), Vol. 2: Cognition, perception and language* (pp. 575-630). New York: Wiley.
- Mandler, J., & McDonough, L. (1993). Concept formation in infancy. *Cognitive Development, 8,* 291-318,
- Medin, D. (1989). Concepts and conceptual structure. *American Psychologist, 44,* 1469-1481.

Am I Seeing Straight? Perceptual Adaptation and Displacement Goggles (SENSATION AND PERCEPTION)

Purpose

The purpose of this activity is to demonstrate perceptual adaptation by the use of distortion goggles.

Upon completion of this activity, students will be able to:

1. Describe the concept of perceptual adaptation;
2. Apply the concept of perceptual adaptation to their lives; and
3. Describe the concept of plasticity as it applies to visual perception.

Materials Needed

- five bean bags
- protective or laboratory goggles with a flat lense
- 30-diopter lenses (available from Fresnel Prism and Lens Company, 7975 N. Hayden Road, Suite A-106 Scottsdale, AZ 85258-3242; telephone number (800) 544-4760)

The 30-diopter lenses are a "press-on" lens that will shift light 15 degrees. In other words, when these 30-diopter lenses are pressed onto the protective goggles, the visual world in front of the person will really be 15 degrees to the side. Cut the diopter lenses to fit into the protective or laboratory goggles. Attach the diopter lenses to the entire front visual field of the goggles.

Estimated Costs

- *Initial:* $55 ($35 for the 30-diopter lenses, $10 for the protective or laboratory goggles, and $10 for bean bags)
- *Ongoing:* $0

Time Required

- *Preparation:* Approximately 15 minutes to prepare the distortion goggles using the diopter lenses.
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

Begin the activity with a description that the human brain is plastic and able to change or adapt to its surroundings. In other words, the brain can rewire itself to adapt to new changes. In addition, present the concept of perceptual adaptation to the students as the visual ability to adjust to artificially distorted or inverted visual fields.

Select a volunteer from the class who is willing to toss the bean bags at a designated target. Be aware that some students may experience nausea while wearing the displacement goggles. Have the volunteer toss the bean bag at a target no less than 10 feet away and record the accuracy for 20 trials. Next, have the volunteer wear the displacement goggles and complete 20 more trials recording the accuracy for the tosses. Finally, have the volunteer remove the glasses and complete five more trials recording the accuracy. Present the results to the students.

Possible discussion questions include:

- To the volunteer – How did you adjust to the change in your visual world?
- How many trials did it take to adapt to the goggles?

- Why was the volunteer off on trials immediately following the removal of the goggles?

Tips for Effectively Engaging Students

The most important aspect of this activity is that the volunteer completes enough trials for perceptual adaptation to occur; more trials are better than a few trials. Be sure to indicate that perceptual-motor areas of the brain are actually being rewired while this activity is going on and brain adapts quickly. Another important aspect is to have the volunteer toss bean bags at the same target and make the target as small as possible. When the volunteer finishes the trials with the goggles have the volunteer toss bean bags immediately. You will observe a greater effect with the immediacy.

Suggested Readings

- Harris, C. S. (1965). Perceptual adaptation to inverted, reversed, and displaced vision, *Psychology Review, 72,* 419-444.

The Stroop Task
(SENSATION AND PERCEPTION)

Purpose

The purpose of this activity is to demonstrate the impact of automatic processes on effortful processes via the Stroop task.

Upon completion of this activity, students will be able to:

1. Identify automatic processes;
2. Identify effortful processes;
3. Explain why incongruence in the Stroop Task results in lower completion times and more errors; and
4. Apply the concept of interference to their personal experiences.

Materials Needed

- Internet-ready computer

There are numerous websites that feature the work of John Ridley Stroop and his famous effect; interactive sites can be found at the University of Washington (http://faculty.washington.edu/chudler/words.html) or University of Michigan (http://www.snre.umich.edu/eplab/demos/st0/stroopdesc.html#Taking%20the%20Stroop%20Test). This activity can be demonstrated online or you can print off Stroop cards at http://faculty.washington.edu/chudler/pdf/ministroop.pdf.

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation*: none (if you are using an interactive, online version)
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

Begin this demonstration by presenting the students a set of color words (20 words) in black ink, and ask them to read off the color names as quickly as possible. You may want to record the completion time for this set. Follow this set with a set of 20 color bars and ask the students to name the colors as quickly as possible. You should also record the completion time for this set. Either using printed cards or an interactive website, present the students with a set of 20 color words printed in an incongruent ink and ask the students to name the color ink as quickly as possible record the time to complete the set. Finally, present all three times and ask the students for an explanation of what occurred. Be sure to address automatic processes (reading, naming color bars), effortful processes (naming the color ink in the incongruent color word condition), and the concept of interference in your discussion of the Stroop Effect.

Possible discussion questions include:

- Why was it more difficult to name the color inks in the incongruent or mismatched set?
- Would there be a way to stop this effect from occurring?
- Name a situation where automatic processes way interfere with effortful ones.
- If you had to create your own Stroop Effect, what would you create?

Tips for Effectively Engaging Students

If the facilitators want to avoid the classical Stroop demonstration, there are a number of variations. One such variation features animal silhouettes with congruent and incongruent labels (Brannigan, 2000). The variations of the classical Stroop materials can target an audience who may have already been exposed to the traditional Stroop research.

Suggested Readings

- University of Washington Neuroscience for Kids (http://faculty.washington.edu/chudler/words.html)
- APA Online; Interference: The Stroop Effect (http://www.apa.org/science/stroop.html)
- ePsych (http://epsych.msstate.edu)
- Confusing Colors (http://www.dcity.org/braingames/stroop/)
- Brannigan, G. (2000). *Experiencing psychology: Active learning adventures.* Upper Saddle River, NJ: Prentice Hall.

Finger Twirling is So Easy!
(CONSCIOUSNESS)

Purpose

The purpose of this activity is to demonstrate the process of automatization and that competing processes (e.g., walking and chewing gum at the same time) can be accomplished through practice.

Upon completion of this activity, students will be able to:

1. Describe the process of automatization; and
2. Demonstrate the finger twirling exercise.

Materials Needed

- none

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 10 minutes.

Procedure

Ask the students to bend both of their arms and have their fists face one another. Next ask them to extend the forefingers of both hands out so that they are almost touching. Next ask the students to rotate their forefingers (and most likely wrists) in a clockwise direction. Have them do this for approximately 20 seconds. Next have them rotate their forefingers in a counter-clockwise direction for 20 seconds. Ask them if this was difficult. Finally, have them rotate their forefingers clockwise for a few seconds and then ask them to rotate the left forefinger clockwise and the right forefinger counter-clockwise and see how many of them can do it (insert laughter here). Have them rotate both fingers clockwise for about 10 seconds and then counter-clockwise for 10 seconds again. Again, ask them to rotate the left forefinger clockwise and the right forefinger counter-clockwise. Explain that two competing motor processes are occurring at the same time. Explain that twirling fingers in opposite directions is possible by automatization or overlearning. Simply stated the activity over time becomes automatic through practice. Demonstrate this by twirling the left forefinger by itself in a clockwise direction for about 60 seconds. Then twirl the right forefinger by itself in a counter-clockwise direction for about 60 seconds. Finally combine both movements and observe how many students are now able to complete the task.

Possible discussion questions include:

- How many of you are able to pat your stomach and rub your head at the same time? Why are you able to do this?
- What makes this activity so difficult?
- What can you do to make this activity easier?
- Does this apply to learning a new sport or activity?
- Create an activity that would demonstrate a similar outcome to the finger twirling. You may not use walking and chewing gum at the same time.

Tips for Effectively Engaging Students

The most important part of this activity is that the facilitator has to have overlearned this action. The competing finger movements of the facilitator need to be automatic.

Selective Attention: Are You Picking Up What I am Laying Down?
(CONSCIOUSNESS)

Purpose

The purpose of this activity is to demonstrate the concept of selective attention by having a group of students listen to one narrative while ignoring another one.

Upon completion of this activity, students will be able to:

1. Describe the concept of selective attention;
2. Provide an example of selective attention from their experiences; and
3. Apply the concept selective attention to their school activities.

Materials Needed

- two different blocks of text or narratives

Try to select topics that are different from one another. For example, one block of text can be from a male-oriented magazine like ESPN Magazine and the other from a female-targeted magazine like Teen People. Select a block of text from each of the source (approximately two paragraphs). Create one set of text with the first paragraph from one source and the second paragraph from the second source. Reverse this for the second set of text.

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* This activity can be created in approximately in 60 minutes.
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

Explain to the students that you are going to demonstrate selective attention (our ability to focus our conscious activity on a particular stimulus and block out others) by having them listen to a volunteer read a story from a magazine while blocking another story being read by another volunteer. Tell them that they will complete a memory test at the end of the story.

Select two volunteers from the class, preferably the same sex (to have matched voices) to read the selections. Select one of the volunteers to be the "target" reader and one to be the "ignored" reader. Instruct the class to listen to the story of the "target" reader. Have both volunteers read their stories out loud at the same time. Following the reading, have students write down as much as they can remember from both readings. Finally, have the volunteers read their selections one after another. Observe the number of students who understood and remembered the story of the "ignored" reader.

Possible discussion questions include:

- How many of you switched stories? Why did this happen? Were you aware that you did this?
- How many of you were able to recall information from the other selection? Why?
- What is an example from your own experience of selective attention?
- To the readers – what information about the other selection do you remember? Why?
- Did the type of selection read have an influence on what you paid attention to?

Tips for Effectively Engaging Students

The most important part of this activity is selecting two student volunteers to read the selections similarly and at the same pace. It is beneficial to have both of the readers complete a practice reading trial for a couple of sentences to acclimate them to the style and pace of the reading task. An additional suggestion is to have the males focus on the male-oriented selection and females on the female-oriented selection. Further discussion can focus on interest levels and motivations.

Suggested Readings

- Cherry, E. C. (1953). Some experiments on the recognition of speech with one and two ears. *Journal of Acoustical Society of America, 25,* 975-979.
- Desimone, R., & Duncan, J. (1995). Neural mechanisms of selective visual attention. *Annual Review of Neuroscience, 18,* 193-222.
- Duncan, J. (1996). Cooperating brain systems in selective perception and action. In T. Inui & J. L. McClelland (Eds.), *Attention and performance XVI* (pp. 549-578). Cambridge, MA: MIT Press.

Using Operant Conditioning to Shape a Novel Behavior
(LEARNING)

Purpose

The purpose of this activity is to demonstrate shaping by having students successively reinforce a desired behavior in a volunteer.

Upon completion of this activity, students will be able to:

1. Describe the process of shaping;
2. Identify reinforcers; and
3. Apply principles of operant conditioning to their own lives.

Materials Needed

- none

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 15 minutes.

Procedure

Select a volunteer from the class who knows he or she will be asked to perform some behavior based upon feedback from the class members. After selecting a volunteer, temporarily dismissed the volunteer from the class discussion (asking the student to briefly leave the room works well). Next, the class has to select two target behaviors to shape in the volunteer: a simple behavior, like raising the left hand, and a complex behavior, for example drawing a smiley face on the board. Inform the class that they will be successively applauding as the volunteer gets closer to performing the desired behavior. Performance of the desired behavior should result in the loudest clapping. Once the selections have been made, invite the volunteer to return into the classroom and ask the volunteer to just “do things” and the class will applaud as the volunteer gets closer to the target behavior. Complete the simple behavior first and then proceed to the complex behavior. Record the time required to shape each behavior.

Possible discussion questions include:

- What would a difficult complex behavior be?
- What could speed up performance of the desired behavior?
- How can the process of shaping be used to train a new employee or an animal?
- What would be a complex behavior that would be really difficult to shape?

Tips for Effectively Engaging Students

Be sure that a willing volunteer is selected. Also, mention that organisms are active in their environment and will seek feedback. To make this activity more interesting, create a competition where the winner is the volunteer who performs the target behavior the quickest. Alternately, providing candy rewards at the conclusion of the activity enhances students’ enthusiasm.

Suggested Readings

- Shaping Behaviors (http://www.dogseast.com/shaping.htm)
- General Features of the Shaping Procedure (http://www-rohan.sdsu.edu/dept/coachsci/csa/vol31/shapgen.htm)

Response Rates as a Function of Reinforcement Schedules
(LEARNING)

Purpose

The goal of this activity is to understand how various reinforcement schedules impact response rates.

Upon completion of this activity, students will be able to:

1. Differentiate between continuous and intermittent reinforcement schedules;
2. Identify reinforcement patterns under fixed-ratio, variable-ratio, fixed-interval, and variable-interval schedules; and
3. Understand response rates as a function of reinforcement schedules.

Materials Needed

- one hand tally clicker counter (available at most office supply or sporting goods stores)
- a set of poker chips
- watch with a minute hand

Estimated Costs

- *Initial costs:* $20 for clicker counter and poker chips
- *Ongoing costs:* $0

Time Required

- *Preparation:* none
- *Presentation:* This hands-on activity can be completed in approximately 20-30 minutes.

Procedure

This demonstration requires eight student volunteers. Begin by having the eight student volunteers leave the room. Bring in two volunteers; one volunteer will be the "learner" and the other volunteer will be the "teacher;" the "learner" will click the hand tally clicker counter and the "teacher" will provide poker chips as reinforcers according to the designated schedule.

Select and explain one of the reinforcement schedules highlighting when the "teacher" will provide the poker chip reinforcement. Then, time the activity for 3 minutes and record the number of clicks and the timing at which poker chips are received. Repeat this procedure with a new set of volunteers until the four reinforcement schedules have been demonstrated.

- Fixed-ratio: one poker chip for every 20 hand tally clicks
- Fixed-interval: one poker chip every 30 seconds
- Variable-ratio: one poker chip after a random, unspecified number of clicks (varying between 5 and 40 clicks)
- Variable-interval: one poker chip after a random, unspecified time period (varying between 10 and 50 seconds)

At the completion of the activity, graph the results and show the comparison of response rates for each reinforcement schedule.

Possible discussion questions include:

- Which reinforcement schedule produces the fastest response rate? Why?
- Which reinforcement schedule is most resistant to extinction? Why?
- Why does the fixed-interval schedule produce a scalloped pattern of responding?
- What type of reinforcement schedule would you choose if you needed quick results?

- What type of schedule would you select if you wanted to prevent burnout?
- What are some real-life examples of reinforcement schedules?

Tips for Effectively Engaging Students

To get students more actively involved, you may want to substitute candy or some other tangible reward in place of the poker chips. In addition, you may increase student motivation for active participation by turning the demonstration into a competition between participants and require all four volunteers to complete the clicker activity at the same time.

Suggested Readings

- Reinforcement Schedules (http://allsands.com/Health/Alternative/reinforcements_xbz_gn.htm)
- Schedules of Reinforcement (http://brembs.net/operant/)
- What is learning? (http://soeweb.syr.edu/faculty/takoszal/IDE621-fa03/IDE621_fa03/Behaviorismpres.pdf)

Demonstrating the Capacity of Short-Term Memory
(MEMORY)

Purpose

The purpose of this activity is to understand the limited capacity of short-term memory and the role of encoding in the memory process.

Upon completion of this activity, students will be able to:

1. Differentiate between short-term and long-term memory;
2. Identify the capacity of short-term memory;
3. Understand the three-process model of memory;
4. Identify common encoding strategies including rehearsal; and
5. Implement various strategies to enhance memory.

Materials Needed

- Internet-ready computer

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 5-15 minutes.

Procedure

Select three to five student volunteers. After accessing the Internet, go to the Simon Memory Game website (http://www.freegames.ws/games/kidsgames/simon/simon.htm). Have each volunteer take a turn completing the Simon memory activity. The score for the game indicates how many colors steps the student was able to remember.

Possible discussion questions include:

- On average, how many color steps could students remember? How does this compare with the capacity of short term memory (7 +/- 2 bits of information)?
- What is a "bit" of information? How might information in the game be chunked?
- What strategies did the students use to remember the colors?
- How could you improve your memory of the colors?
- At the conclusion of this discussion, who can remember their color sequence? How does this relate to the duration of short term memory?

Tips for Effectively Engaging Students

At the beginning of the activity, it is often interesting to have students predict the number of colors that they will be able to remember. Then you can compare the actual memory with the predicted memory. Also, you can show the role of interference by requiring some students to count backwards while they are completing the activity.

Suggested Readings

- My Simon Game Online (http://www.freegames.ws/games/kidsgames/simon/simon.htm)
- Memory (http://www.nwlink.com/~donclark/hrd/learning/memory.html)

Tying Your Shoe is Difficult
(MEMORY)

Purpose

The purpose of this activity is to demonstrate a type of long-term memory known as procedural memory.

Upon completion of this activity, students will be able to:

1. Identify the different types of long-term memories;
2. Describe procedural memories; and
3. Apply the concept of procedural memory to their lives.

Materials Needed

- shoe with tie laces

Estimated Costs

- *Initial:* $0 (assuming you have access to a shoe with tie laces)
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 10 minutes.

Procedure

Begin the activity by explaining that there are different types of long-term memories. Some of these memories we can tell others about (e.g., semantic- facts/ general information- and episodic- personal experiences). Other types of long-term memories we have difficulty explaining – procedural memories. These types of memories are typically associated with highly automatic processes, like tying a shoe.

Ask the class by show of hands how many of them know how to tie a shoe. From that group ask for a volunteer who will be willing to describe how to tie a shoe using only verbal descriptions (you may want to wait to reveal this detail after a volunteer has come to the front of the classroom). As the volunteer explains the process, have the facilitator follow the instructions exactly as he or she attempt to tie a shoe. Discuss the outcomes of the descriptions.

Possible discussion questions include:

- What are other types of procedural memories?
- Why are these memories so difficult to explain?
- How do these types of memories apply to sports?
- What can be done to better coach these types of memories?

Tips for Effectively Engaging Students

Encourage outgoing students to participate. As tying a shoe is a fairly simple procedure, be sure to press the volunteer to provide step-by-step exact instructions; this will better illustrate the automatic component of procedural memories. If time permits, other activities to describe include driving a stick-shift car or making a peanut butter and jelly sandwich.

Suggested Readings

- Pathways to Procedural Memory (http://ahsmail.uwaterloo.ca/kin356/ltm/procedural.htm)

From Point A to Point B: Using Our Cognitive Maps
(COGNITION AND INTELLIGENCE)

Purpose

The purpose of this activity is to demonstrate the mental representations of environments we encounter and to illustrate that the cognitive maps may vary from person to person.

Upon completion of this activity, students will be able to:

1. Describe the concept of a cognitive map;
2. Reflect on the types of cognitive maps that they have created; and
3. Understand that others with an equivalent exposure to the same environment may have a different cognitive map.

Materials Needed

- plain copy paper
- pen or pencil

Estimated Costs

- *Initial:* <$1 for paper and writing utensils
- *Ongoing:* minimal cost to replace used paper

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 20 minutes.

Procedure

Begin this activity by explaining that people create internal or mental representations of the environments they are exposed to (e.g., home, school, neighborhood, etc). In order to examine the students cognitive maps more closely, pass out the blank copy paper and ask the students to draw a map of their school. Allow 10 minutes to complete this. Discuss the representations drawn by the students.

Possible discussion questions include:

- What perspective is represented in your map – topographical (bird's eye view) or first person? Why is this? Have you ever viewed your school from an aerial view?
- What features did you include in your map?
- Which features did you miss? How would this change if you were a custodian or fire extinguisher inspector?

Tips for Effectively Engaging Students

Focus on the individual differences found in maps. Also, post the maps and try to predict the person who produced it or the person's interests.

Suggested Readings

- Tolman, E. C. (1948). Cognitive maps in rats and men. *Psychological Review, 55,* 189-208.
- Cognitive Maps in Rats and Men (http://psychclassics.yorku.ca/Tolman/Maps/maps.htm)
- An Introduction to Cognitive Maps (http://www.cogs.susx.ac.uk/lab/nlp/gazdar/teach/atc/1999/web/verenah/)

Multiple Intelligences
(COGNITION AND INTELLIGENCE)

Purpose

The purpose of this activity is to demonstrate different types of intelligence through an ice-breaker exercise.

Upon completion of this activity, students will be able to:

1. Describe the eight different multiple intelligences;
2. Gain understanding into multiple intelligences and into their own strengths and weaknesses; and
3. Understand that individuals will differ in intelligence.

Materials Needed

An activity sheet that directs students to find someone who can:

- Hum the Star Spangled Banner
- Demonstrate the proper basketball shooting technique
- Recite four lines from a poem
- Explain why a rainbow consists of various colors
- Draw a map to the nearest restroom
- Honestly say they are relaxed and comfortable relating to other students during this exercise
- Briefly share a recent dream
- Name five different types of trees

Estimated Costs

- *Initial:* <$1 for copies of the activity sheet
- *Ongoing:* $0

Time Required

- *Preparation:* 5 minutes to prepare and copy the activity sheet
- *Presentation:* This activity can be completed in approximately 25 minutes.

Procedure

Explain to the students that there are different areas in which we can display intelligence. To demonstrate this, pass out a copy of the activity list (containing directions to find someone who can complete each of the tasks) and give students 10 – 15 minutes to find a person to complete each of the tasks. Tell students that only one student can complete each task and have that person initial the line. When the students have completed the list, go through the list task by task and explain the associated intelligence (the intelligences in order are: Musical; Kinesthetic; Linguistic; Scientific; Spatial; Interpersonal; Intrapersonal; Naturalist).

Possible discussion questions include:

- Which tasks were easy to find someone to complete? Difficult?
- How do these represent a type of intelligence?
- How are these intelligences represented in your school activities?
- Which of these is the strongest in you?

Tips for Effectively Engaging Students

Be sure that all students are actively engaged in the activity; you may need to encourage shy students to identify their strengths and offer to initial the activity sheets of their peers.

Suggested Readings

- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice.* New York: Basic Books.
- Multiple Intelligences (http://www.thomasarmstrong.com/multiple_intelligences.htm)

Identifying Emotion as a Function of Facial Expression (EMOTION)

Purpose

The goal of this activity is to examine the relationship between facial expression and emotional transmission.

Upon completion of this activity, students will be able to:

1. Understand the role of facial expression in the communication of emotion;
2. Examine individual differences and cultural similarities in the expression of emotion; and
3. Understand the relationship between the expression of and the feeling of emotion.

Materials Needed

- 30 index note cards

Estimated Costs

- *Initial:* $2 for index cards
- *Ongoing:* $0

Time Required

- *Preparation:* Allow 15 minutes to prepare expression index cards.
- *Presentation:* This activity can be completed in approximately 10-15 minutes.

Procedure

Write each of the following emotions on two different index cards: happy, sad, fear, disgust, anger, jealousy, surprise, apprehension, love, joy, interest, distress, disapproval, boredom, and desire. Shuffle the cards together and ask for a volunteer to use only facial expressions to convey the emotion on the card. Taking turns, have students attempt to demonstrate the emotion written on their card using only facial expression while the rest of the class attempts to guess the emotion.

Possible discussion questions include:

- What cues did you use to determine the emotion?
- Were there similarities between the facial expressions associated with different emotions? If so, which ones?
- How do we differentiate between similar emotions?
- What information does facial expression generally communicate?
- Can there be emotion without facial expression? Can there be a facial expression of emotion without emotion?
- How do people differ in their facial expressions of emotion?
- Are there cultural differences in the expression of emotion?

Tips for Effectively Engaging Students

For each emotion, write the key features of the facial expression on the board. Then, record all student guesses as to the emotion that is being conveyed. Compare the lists to look for similarities in facial expressions as well as similar emotions. At the conclusion of the activity, count the total number of different emotions expressed. Ask students how many different emotions we can experience. From this point, you can introduce the six universally recognized emotions and discuss cultural differences in other aspects of emotional expression.

Suggested Readings

- Facial Expressions of Emotion (http://www.dushkin.com/connectext/psy/ch10/facex.mhtml)
- Facial Expression Resource Page (http://www.irc.atr.jp/~mlyons/facial_expression.html)
- Facial Analysis (http://mambo.ucsc.edu/psl/fanl.html)
- Espire Expression of Emotion (http://library.thinkquestafrica.org/TQA00098/overv11.shtml)

Evaluating the Accuracy of Personality Profiles: The Barnum Effect (PERSONALITY)

Purpose

The goal of this activity is to examine the accuracy and precision of personality profiles. Specifically, students will critically evaluate the precision and specificity of a variety of personality descriptions to determine their utility as a psychological profile.

Upon completion of this activity, students will be able to:

1. Understand personality as an enduring, consistent pattern of thoughts, feelings, and behaviors;
2. Critically examine the scientific basis underlying personality trait descriptions;
3. Understand the use of factor analysis to develop personality traits; and
4. Differentiate between empirically-based personality descriptions and pseudoscientific profiles.

Materials Needed

- Internet-ready computer

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 15-20 minutes.

Procedure

Invite 4 student volunteers to complete online personality profiles; have 2 students complete an online version of a validated personality inventory (such as http://www.outofservice.com/bigfive/ or http://similarminds.com/myers-briggs.html) and have 2 students complete a non-validated personality test (such as http://www.colorgenics.com/sps/ or http://www.ullazang.com/personality.html). At the completion of the activity, have the entire class examine the personality profiles to determine the precision and accuracy of the descriptions.

Possible discussion questions include:

- Are these descriptions unique to this person or do they describe a lot of people?
- Are there aspects of the personality description that are true and aspects that are not true?
- When reading your personality profile, do you tend to pay more attention to information that fits your self-image or information that seems contradictory?
- How are personality descriptions different from fortune telling or astrology?
- How do you determine the validity of a personality test?
- What are personality profiles useful for?

Tips for Effectively Engaging Students

To help engage the entire class, ask students to read the personality profiles to see if aspects of the description accurately describe their personality. At this point, it is helpful to point out that many pseudopsychological personality descriptions are very vague or general which allows virtually all individuals to see aspects of their personality in the description.

Suggested Readings

- All About You (http://www.outofservice.com/bigfive/)
- Similar Minds Big Five Personality Test (http://similarminds.com/big5.html)
- Similar Minds Myers-Briggs Personality Test (http://similarminds.com/myers-briggs.html)
- Humanmetrics Jung Typology Test (http://www.humanmetrics.com/cgi-win/JTypes2.asp)
- Colorgenics Psychological Profile (http://www.colorgenics.com/sps/)
- Zang Personality Test (http://www.ullazang.com/personality.html)

Projective Tests and Kokology
(PERSONALITY)

Purpose

The purpose of this activity is to demonstrate projective tests and introduce students to a Japanese type of psychology area known as Kokology, the study of self-discovery.

Upon completion of this activity, students will be able to:

1. Describe the concept of projective tests;
2. Describe the psychology area known as Kokology; and
3. Apply these concepts to understanding their thinking and motivation.

Materials Needed

- games posed either in a Kokology book or on a Kokology-related website (such as http://www.booksense.com/fun/kokology/index.jsp)

Estimated Costs

- *Initial:* $0 - $15 for Kokology games (cost depends on whether one uses Internet sources or a Kokology book)
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 15 minutes.

Procedure

Explain that there are cultural interests within the discipline of psychology. While the students may have heard about Gestalt psychology, they may not have heard of Kokology, a Japanese-influenced series of psychological games created to uncover a person's emotional and behavioral traits. Kokology studies these traits through projective scenarios. Provide an explanation of projective tests. Lead the class in a couple of games from a Kokology source.

Possible discussion questions include:

- Do your answers fit the explanations given by the kokologists? Explain.
- Do you see any issues with using a projective test to indicate personality traits?
- Are these psychological games an accurate way of discovering oneself?
- What would a better way be to study emotional and behavioral traits?
- Create your own game.

Tips for Effectively Engaging Students

Review the scenarios beforehand to select an interesting range of questions. Be sure to point out that areas of interest may be culturally influenced.

Suggested Readings

- Nagao, T., & Saito, I. (2000). *Kokology: The game of self-discovery.* New York: Simon and Schuster.
- "Kokology" plays self-discovery games with your brain (http://www.cnn.com/2000/books/news/12/21/kokology.book/)

Stigma of Mental Illness in the Movies
(PSYCHOLOGICAL DISORDERS AND TREATMENT)

Purpose

The goal of this activity is to examine the role of movies in influencing common perceptions about mental illness.

Upon completion of this activity, students will be able to:

1. Critically examine the accuracy of mental illness portrayals in the movies; and
2. Understand the societal impact of the inaccurate representation of mental illness by the movies.

Materials Needed

- name and brief description of 2 or 3 popular movies that portray mental illness
- brief summary of DSM criteria for diagnosing mental illnesses that are targeted by the selected movies

Possible movies:

- Me, Myself, and Irene (dissociative identity disorder)
- As Good as it Gets (obsessive-compulsive disorder)
- The Three Faces of Eve (dissociative identity disorder)
- What Dreams May Come (depression)
- The Snake Pit (schizophrenia)
- A Beautiful Mind (schizophrenia)
- Adaptation (anxiety disorders)
- Swimfan (borderline personality disorder)
- The Hand That Rocks the Cradle (borderline personality disorder)
- One Flew Over the Cuckoo's Nest (hospitalization of the mentally ill)
- Conspiracy Theory (paranoia delusional disorder)
- Forest Gump (mental retardation)
- Rainman (autism)
- Memento (amnesia)
- When a Man Loves a Woman (alcoholism)
- 28 Days (alcoholism)
- Good Morning Vietnam (bipolar disorder)
- What About Bob (panic disorder)
- Arachnophobia (specific phobia)
- Born on the Fourth of July (posttraumatic stress disorder)
- Silence of the Lambs (paraphilias)
- Insomnia (insomnia)

For a comprehensive list of movies by DSM diagnosis, see Movies and Mental Illness: Psychology, Psychiatry and the Movies (http://faculty.dwc.edu/nicosia/moviesandmentalillnessfilmography.htm).

Estimated Costs

- *Initial:* $0 (optional costs to rent or purchase the movies if you wish to show short clips in class)
- *Ongoing:* $0 (optional cost to rent movies for demonstrations)

Time Required

- *Preparation:* Allow approximately one hour to generate movie descriptions and create DSM diagnostic summary sheets.
- *Presentation:* This activity can be completed in approximately 30 minutes.

Procedure

When designing the discussion, try to select popular movies that many students in your group are likely to have watched. Select a movie and ask students what they remember about the movie; in particular, have students describe aspects and features of the mental illness that was portrayed in the movie. Once they have fully described the mental illness as illustrated by the movie, ask if they can generate other movies that have focused on the same mental illness. Compare the depictions of the mental illness as shown by the various movies. At this point, pass out the DSM criteria for diagnosis of the mental illness. Review the criteria and lead a discussion on the accuracy of the movie in relation to the DSM criteria.

Possible discussion questions include:

1. How accurately do the movies typically portray mental illness?
2. What is the social impact of the presentation of mental illness in the movies?
3. What mental illnesses are most commonly portrayed in the movies?

Tips for Effectively Engaging Students

This discussion is especially engaging when you show brief clips of popular, modern movies. After watching the clips, talk about the accuracy of the portrayal in relationship to the popularity of the movie. Have students generate reasons that movies may not provide the most realistic picture of mental illness.

Suggested Readings

- Movies and Mental Illness: Psychology, Psychiatry and the Movies (http://faculty.dwc.edu/nicosia/moviesandmentalillnessfilmography.htm)
- A Rare Day: The Movies Get Mental Illness Right (http://utminers.utep.edu/jawood/Abnormal%20Psychology%20Documents/A%20Rare%20Day%20The%20Movies%20Get%20Mental%20Illness%20Right.htm)
- Are Movies Confusing People's Impression of Mental Illness? (http://www.hubin.org/publicfamilyinfo/opinions/texts/ment_illness_onfilm_en.html)

Using ELIZA to Demonstrate Client-Centered Therapy
(PSYCHOLOGICAL DISORDERS AND TREATMENT)

Purpose

The purpose of this activity is to illustrate the non-directive nature of client-centered therapy techniques.

Upon completion of this activity, students will be able to:

1. Differentiate between directive and non-directive forms of therapy;
2. Identify key features of client-centered therapy; and
3. Understand the role of the therapist in client-centered therapy.

Materials Needed

- Internet-ready computer

Estimated Costs

- *Initial:* $0
- *Ongoing:* $0

Time Required

- *Preparation:* none
- *Presentation:* This activity can be completed in approximately 5-15 minutes.

Procedure

Ask for a student volunteer to have a discussion with ELIZA the virtual therapist (a computer simulation created in the late 1960s to imitate Rogerian therapy). After accessing the Internet, go to the ELIZA website (http://www-ai.ijs.si/eliza/eliza.html). Ask the student to spend three to five minutes on their virtual conversation.

Possible discussion questions include:

1. What was the most challenging aspect of talking to ELIZA?
2. Why skills would be important to a Rogerian therapist?
3. What are the advantages and disadvantages of client-centered therapy?
4. Do you think client-centered therapy can be equally effective for all types of disorders?

Tips for Effectively Engaging Students

Students generally enjoy “talking” to ELIZA, so you may want to allow several students to have brief discussions with ELIZA while you provide background information on Carl Rogers and client-centered therapy. In addition, after working with ELIZA you may want to initiate a discussion on the advent of “online therapy” or “virtual therapists”.

Suggested Readings

- ELIZA (http://www-ai.ijs.si/eliza/eliza.html)
- Client-Centered Therapy (http://world.std.com/~mbr2/cct.html)
- Significant Aspects of Client-Centered Therapy (http://psychclassics.yorku.ca/Rogers/therapy.htm)
- Carl Rogers (http://www.ship.edu/~cgboeree/rogers.html)

Personal Space Requirements
(SOCIAL PSYCHOLOGY)

Purpose

The goal of this activity is to examine the role of personal space as a factor influencing interpersonal relationships.

Upon completion of this activity, students will be able to:

1. Identify factors that influence personal space requirements;
2. Understand socio-cultural differences in personal space;
3. Differentiate between intimate, personal, social, and public personal space requirements; and
4. Understand theoretical reasons (protection theory, equilibrium theory, and expectancy violations theory) for the development and maintenance of personal space requirements.

Materials Needed

- 4 sewing measuring tapes
- masking tape

Estimated Costs

- *Initial:* $10-$15 for four sewing measuring tapes
- *Ongoing:* $0

Time Required

- *Preparation:* Allow approximately 10 minutes to prepare this activity each time that set-up is required.
- *Presentation:* This hands-on activity can be completed in approximately 5-10 minutes.

Procedure

Using masking tape, place an X on the floor. On all four sides, approximately 6 inches from the X, place a sewing measuring tape on the floor so that the increasing measurements go away from the X. Secure the measuring tapes to the floor so that the measuring tapes will remain in place while being walked on.

You will need two student volunteers for the demonstration. Direct one student to stand directly on the X. Following the measuring tape on the floor, have the other student slowly approach the student in the center. Instruct the student in the center to say “stop” when the approaching person is close enough that he/she begins to feel slightly uncomfortable. Record the distance between the students as indicated by the measuring tape on the floor. Repeat the activity approaching the student from the front, back, and both sides.

Possible discussion questions include:

- What is the standard shape of an individual’s personal space requirement?
- What factors may influence our desired personal space?
- Are there cultural differences in personal space requirements?
- How does personal space influence interpersonal relationships?

Tips for Effectively Engaging Students

In addition to the initial demonstration, you may want to repeat the activity with different gender combinations (male approaching male, male approaching female, female approaching male, and female approaching female). This often prompts a discussion of various factors that

influence personal space requirements and the impact of violating an individual's personal space.

Suggested Readings

- Altman, I. (1975). *The environment and social behavior.* Monterey, CA: Brooks/Cole.
- Cochran, C., & Hale, W. (1984). Personal space requirements in indoor versus outdoor locations. *Journal of Psychology, 117,* 121-123.
- Gibson, B., Harris, P., & Werner, C. (1993). Intimacy and personal space: A classroom demonstration. *Teaching of Psychology, 20,* 180-181.
- Scott, A.L. (1993). A beginning theory of personal space boundaries. *Perspectives in Psychiatric Care, 29,* 12-21.

Internalization of Gender Roles and Expectations
(SOCIAL PSYCHOLOGY)

Purpose

The goal of this activity is to understand the subtle impact of gender stereotypes on cognition and behavior.

Upon completion of this activity, students will be able to:

1. Understand gender role expectations;
2. Identify factors that lead to the development of gender roles;
3. Understand positive and negative consequences of relying on gender roles and stereotypes; and
4. Differentiate between stereotypes, discrimination and prejudice.

Materials Needed

- 5 pictures of gender stereotyped consistent professionals
- 5 pictures of gender stereotyped inconsistent professionals
- stopwatch

The pictures may be obtained by either searching for existing pictures or by creating your own. Generally, preparation is quicker and easier if you are able to find existing pictures. The Internet provides access to thousands of pictures; good sites for locating quality pictures are Gibson Stock Photography (www.markgibsonphoto.com) and Better Photo (www.betterphoto.com). Be sure to select professions which are easily identifiable via visual cues. Possible pictures for the gender stereotyped consistent professionals are: female elementary school teacher, female secretary, male dentist, male firefighter, and male farmer. Possible pictures for the gender stereotyped inconsistent professionals are: male nurse, male flight attendant, female construction worker, female police officer, and female car mechanic.

Estimated Costs

- *Initial:* $10-$20 for a stopwatch
- *Ongoing:* $0

Time Required

- *Preparation:* Allow approximately 24-48 hours to prepare this activity for the first time (you will need to allow time to either locate relevant pictures or to have pictures taken and developed). Once the activity has been created, there is no ongoing preparation time.
- *Presentation:* This hands-on activity can be completed in approximately 10 minutes.

Procedure

This demonstration requires an individual student volunteer. Present the 10 pictures (randomly mix the stereotype-consistent and stereotype-inconsistent pictures) one at a time asking the subject to identify the profession as quickly as possible. Use the stopwatch to record the time taken to identify each profession (reaction times will be fairly quick, so it is helpful to have a second person running the stopwatch and recording the times). Differentiate reaction times for stereotype-consistent and stereotype-inconsistent professions. Display the reaction times in a graph or table. Generally, reaction time will be slightly slower for pictures of gender stereotype inconsistent professions.

Possible discussion questions include:

- Why are reaction times longer for pictures of gender stereotype inconsistent professions?
- Where do gender stereotypes come from?
- How do these subtle differences in our reactions to gender-consistent and gender-inconsistent information lead to possible bias or discrimination?
- What gender stereotypes are common in our society?
- Are gender stereotypes helpful or harmful?

Tips for Effectively Engaging Students

This activity provides a good point to start a discussion on societal consequences of gender roles and stereotypes. Once students understand the use of gender roles, you can expand the discussion to illicit personal experiences in which students were treated in a biased manner due to their gender. Have students identify their own gender expectations and biases.

Suggested Readings

- Beware of Gender Stereotypes in the Workplace (http://www.speaking.com/articles_html/JaneSanders_543.html)
- Avoiding Gender Stereotypes (http://www.parents.com/articles/ages_and_stages/3082.jsp)