# ACTITIVIY 1A: Touch Activity \_ Two-Point Discrimination

**Materials**

Two-point discriminator

**Procedure**

1. Group into pairs, and then choose a test subject and an experimenter.
2. Test Subject: Place your hand palm-up and motionless on the desk. When you ae ready, close your eyes and say “one” or “two” depending on the number of points of contact you feel on the area being tested. The experimenter will test your fingertip, back of the neck, mid-calf, and palm of the hand, and repeat this procedure three time.
3. Experimenter: Start with the two points of the two-point discriminator closed, with the pointer at 0mm. Begin the experiment by touching the subject’s fingertip. The test subject should keep his or her eyes closed and should feel only one point.
4. Experimenter: Create a 1 – or 2-mm gap between the points of the probe by moving the indicator to the 1 mm or 2mm mark. Then, touch the test subject’s fingertip with the discriminator points again.
5. Experimenter: Continue opening the two-point discriminator, increasing the distance between the points by 1 or 2 mm each time, until the test subject reports feeling two separate points. The minimum distance at which the test subject can perceive two points is known as the “two-point threshold”. Record the two-point threshold distance in the “Fingertip/Trial 1” cell in Table 1.
6. Experimenter: Repeat Step 2 through Step 5 for the following parts of the body: the back of the neck, the mid-calf, and the palm of the hand. Record each of these results in the “Trial 1” column of Table 1.
7. Experimenter: Conduct two more trials at each location and record the two-point threshold values in the appropriate rows and columns of Table 1.
8. Switch roles and conduct the exercise again, recording the two-point threshold values for the new test subject.
9. Calculate the average two-point threshold for each body location.

**TABLE 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Location** | **Trial 1 (mm)** | **Trial 2 (mm)** | **Trial 3 (mm)** | **Average (mm)** |
| **Fingertip** |  |  |  |  |
| **Back of Neck** |  |  |  |  |
| **Mid-Calf** |  |  |  |  |
| **Palm** |  |  |  |  |

# **ACTIVITY 1B: Touch Activity\_ Wooden Dowel Tapping**

**Materials**

2 wooden dowels

**Procedure**

1. Group into pairs, and then choose a test subject and an experimenter.
2. Test Subject: Stand with your arms extended, holding the end of a wooden dowel in each hand.
3. Experimenter: Instruct the test subject to close his or her eyes and to shake the wooden dowel that is tapped first.
4. Experimenter: In quick succession, lightly tap the end of each wooden dowel. Note the test subject’s response as to which was tapped first. It is important that very little time lapses between successive taps.
5. Experimenter: Repeat the tapping successions 10 times. Count how many times the test subject responds correctly and record this data in Table 2.
6. Experimenter: Instruct the test subject to cross his or her arms, forming an X, while keeping his or her eyes closed.
7. Experimenter: Repeat the test and record the correct number of responses in Table 2.
8. Experimenter: Instruct the test subject to cross the wooden dowels, while also keeping his or her arms crossed.
9. Experimenter: Repeat Step 4 and Step 5 and record the correct number of responses in Table 2.
10. Switch roles and conduct the exercise again, recording the correct number of responses for the new test subject.

|  |  |
| --- | --- |
| **Arm Configuration** | **Correct Responses (out of 10)** |
| **Uncrossed** |  |
| **Crossed** |  |
| **Crossed, with Wooden Dowels Crossed** |  |

**TABLE 2**

# **ACTIVITY 1C: Touch Activity\_ Aristotle Illusion**

**Materials**

Marble

**Procedure**

1. Cross your middle finger over your index finger.
2. Place a marble on the table top and place the pads of your crossed fingers on top of the marble.
3. Look away from your hands, and then slightly roll the marble back and forth in the crevice of your crossed fingers.

# **ACTIVITY 2A: Sight Activity \_ Blind Spot**

**Materials**

Deck of illusion cards

Ruler

**Procedure**

1. Remove the 9 of Spades from the deck of illusion cards.
2. Hold the card in your right hand with your arm extended, level with your eye. The face on the card should be to the right of the target.
3. Close your left eye and look at the target on the card with your right eye.
4. Slowly pull the card toward your right eye, continuing to focus on the target.
5. When the face disappears, have another group member measure the distance from your eye to the card. Record the distance in Table 3.
6. Repeat the procedure to find the blind spot in your left eye. This time, hold the card in your left hand with your right eye closed. The face should be to the left of the target. Record the distance in Table 3.

**TABLE 3**

|  |  |
| --- | --- |
| **Eye** | **Distance (cm)** |
| **Right** |  |
| **Left** |  |

# **ACTIVITY 2B: Sight Activity \_ Afterimages**

**Materials:**

Deck of illusion cards

Sheet of white paper

Colored pencils

**Procedure:**

1. Remove the four kings from the deck of illusion cards.
2. With both eyes open, focus for 30-60 seconds **on one** of the Kings from the deck of illusion cards.
3. Immediately look at a sheet of white paper.
4. Using colored pencils to draw the image you saw on the white paper.
5. Repeat the preceding steps for the other three kings.

# **ACTIVITY 2C: Sight Activity \_ Benham’s Disk**

**Materials**

Deck of illusion cards

Paperclip

**Procedure**

1. Find the 3 of Spades and examine the image on the card. Find the matching card without a number or suit in the deck. You will use this unmarked card in the following steps. Return the 3 of Spades to the deck.
2. Unfold the paperclip at your desk to form a straight piece of wire. Push a hole into the middle of the circle on the unmarked card.
3. Push the paperclip wire through the hole in the middle of the unmarked card.
4. With the card on the unbent paperclip wire, spin the card. Closely observe the disk in the center of the card.
5. Vary the speed of the card.

# **ACTIVITY 3A: Smell Activity**

**Materials**

Cup 1

Cup 2

**Procedure**

The cups containing the clear solutions and labeled “1” and “2” will be used for this activity. Be sure to perform the test using the cups in the order indicated and record the data accurately in the data table.

1. Group into pairs, and then choose a test subject and an experimenter.
2. Test Subject: You will be asked to identify four smells. Close your eyes.
3. Experimenter: Hold Cup 2 about 5 centimeters (2 inches) from the test subject’s nose. Have the test subject smell the solution in Cup 2 and identify the scent. Record the test subject’s response in the “Initial Scent” column in Table 4.
4. Experimenter: Hold Cup 1 about 5 centimeters (2 inches) from the test subject’s nose. Have the test subject smell the solution in Cup 1 and identify the scent. Record the test subject’s response the “Initial Scent” column in Table 4.
5. Experimenter: Hold Cup 1 up to the test subject’s nose once more. Instruct him or her to take deep breaths, inhaling through the nose. This time have the test subject smell the solution continuously for 2-3 minutes before identifying the smell.
6. Experimenter: Immediately after the test subject identifies the final scent of Cup 1, replace the cup with Cup 2 and have the test subject identify the scent.
7. Experimenter: Record the test subject’s responses to Cup 1, and Cup 2 in the “Final Scent” column of Table 4.
8. Switch roles and conduct the exercise again, recording the initial and final scent responses for the new test subject.

**TABLE 4**

|  |  |  |
| --- | --- | --- |
| **Solution** | **Initial Scent** | **Final Scent** |
| **Cup 1** |  |  |
| **Cup 2** |  |  |

# **ACTIVITY 3B: Taste Activity**

**Materials**

5 4-oz. cups of solutions (A, B, C, D, E)

Cut straws

**Procedure**

The cups containing colored solutions and labeled A, B, C, D, and E will be used for this activity.

1. Place a cut straw into Cup A.
2. Put a finger on the exposed end of the straw, trapping liquid in the straw.
3. Open your mouth, placing the straw over your tongue, and release your finger from the top of the straw. THROW AWAY THE STRAW IMMEDIATELY.
4. Taste the solution and write down the flavor in Table 5.
5. Using a different straw for each solution, repeat the preceding steps for cups B, C, D, and E.
6. Record your results in Table 5.

**TABLE 5**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Flavor** | **Cup A** | **Cup B** | **Cup C** | **Cup D** | **Cup E** |
| **Observed** |  |  |  |  |  |