Lab

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| **Date:** | **Title:** Skin Receptors |

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| **Exp. Number**3 | **Experiment/Subject:** Skin Receptors | **Date:** Put date lab was performed |  |
| **Name:** YOUR NAME | **Lab Partner**WHO YOU WORKED WITH | **Locker/Desk No.** N/A | **Course & Section #**Class & Period |

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| Question:  |
| Which part of the skin is the most sensitive? |

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| Background information (don’t copy into nb) |
| As discussed, your skin has nerves that allow you to feel pain, pressure, and temperature. It receives information from the world and relates it to your nervous system. The density and distribution of touch receptors varies from one part of your body to another. This has a direct effect on your ability to localize touch. Areas with more receptors should allow you to pinpoint touch more accurately than areas with fewer touch receptors. Touch receptors are not evenly distributed throughout all parts of the body. When a constant stimulus is applied to a sensory receptor, it responds best initially, and the response then usually decreases (sensory adaptation). In order for sensory receptors to respond to a wide range of stimulus intensities, they are often designed to detect a change in intensity that is a certain fraction of the initial intensity, rather than the absolute change (i.e., they work on a log scale rather than a linear scale). Referred pain is the phenomenon of perceiving pain in one area of the body when another area is actually receiving the painful stimulus. |

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| Introduction: Write this section AFTER you have completed the hypothesis and procedure. |
| Make sure to include:* T = Topic (state goals & objectives of lab)
* I = Introduction of Evidence (what data will be collected)
* E = Evidence (how it will be collected—summarize experiment)
* D = Development of Evidence (what data might you expect and what conclusion can you come to)
* C= Conclusion
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| variables:  |
| **Independent variable:****Dependent variable:****Constants:** |

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| hypothesis:  |
| \*Write it using if-then-because statement |

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| equations:  |
| N/A |

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| materials:  |
| Materials:* Paper Clip
* Pen
* Lab Partner
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| Procedure:List each step and write it in the command voice. | Observations: |
| 1. With eyes closed, have lab partner touch wrist with a pen. The touch should be gentle enough not to hurt, but firm enough to leave a small mark.

 1. Keeping eyes closed; try to place the eraser end of a pencil or the tip of the pen on the spot touched by lab partner. Once found, hold it there.

 1. Have lab partner measure the difference in distance between the two spots. Record the distance in the table below.
2. Repeat the steps two more times. Average the results.
3. Repeat the experiment on the other parts of the body listed below. Record and average the results.

**Reminders**:* Make sure partner is not looking during the test.
* Only *lightly* press against partner’s skin.
* **Repeat the test at least three times**
* Try to avoid doing the test through thick layers of clothing.
 | **Describe 5 senses. Include diagrams to indicate what happens during different parts of the experiment. In your lab notebook, record observations as you see them. You may want to record the time and be as descriptive as possible. Feel free to draw pictures if they help you!** |

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| Data:  |

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| # | Location | Left Trial #1  | Left Trial #2 | Right Trial #1 | Right Trial #2 | Average |
| 1 | Wrist |  |  |  |  |  |
| 2 | Elbow |  |  |  |  |  |
| 3 | Top of Arm |  |  |  |  |  |
| 4 | Bottom of Arm |  |  |  |  |  |
| 5 | Front of Knee |  |  |  |  |  |
| 6 | Upper Leg |  |  |  |  |  |
| 7 | Lower Leg |  |  |  |  |  |
| 8 | Back of hand |  |  |  |  |  |
| 9 | Palm of hand |  |  |  |  |  |
| 10 | Chin |  |  |  |  |  |
| 11 | Cheek |  |  |  |  |  |
| 12 | Nose |  |  |  |  |  |
| 13 | Upper Back |  |  |  |  |  |
| 14 | Lower back |  |  |  |  |  |
| 15 | Tip of thumb |  |  |  |  |  |

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| conclusion:  |
| * My hypothesis was correct incorrect inconclusive (circle one)
* 2 pieces of evidence (use numbers) that proved my hypothesis to be correct:
* Sources of error:
* Things to change in the experiment:
* Two questions about experiment:
* REAL WORLD CONNECTION: Is there an advantage for a certain area to have more touch receptors? Explain.
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| Group work reflection:  |
| **Roles: (4 pts) Please put first AND last name!**1. Task Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Spokesperson: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Data Collector: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Resource Manager \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Checklist: (4 pts)*** Did each person play a part in the lab and on task?
* Did you follow safety rules?
* Were all parts of lab completed?
* Was group workspace cleaned up?

**Answer the following questions: (10 pts)**What worked well the most during the assignment for the group?What did not work so well during the assignment for the group?Where did you disagree as a group or saw mistakes in each other’s work?What will you do next time to improve how your group worked together?How much did you as an individual participate in the group? What can you do next time to improve your own performance in the lab group? |

**Group Rubric:**

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|  | **Poor****1 point** | **Developing****2 points** | **Good****3 points** | **Excellent****4 points** | **Group Rating****(YOU RATE)** | **Teacher** **Rating** |
| **Contribution** | One or more members do not contribute. | All members contribute, but some contribute more than others. | All members contribute equally. | All members contribute equally, and some even contribute more than was required. |  |  |
| **Cooperation** | Teacher intervention needed often to help group cooperate. | Members work well together some of the time. Some teacher intervention needed. | Members work well together most of the time. | All members work well together all of the time; assist others when needed. |  |  |
| **On task** | Team needs frequent teacher reminders to get on task. | Team is on task some of the time. Needs teacher reminders. | Team is on task most of the time. Does not need any teacher reminders. | Team is on task all of the time.Does not need any teacher reminders. |  |  |
| **Communication** | Members need frequent teacher intervention to listen to each other and speak to each other appropriately. | Members need some teacher intervention to be able to listen to each other and speak to each other appropriately. | All members listen to each other and speak to each other in equal amounts. | Each member listens well to other members. Each member speaks in friendly and encouraging tones. |  |  |
| **Total Score: /32** | /16 | /16 |

* **TOTAL SCORE ON REFLECTION: \_\_\_\_\_\_\_\_\_/50**
* **GROUP RATING: \_\_\_\_\_\_\_\_\_/32**
* **Completion of Lab: \_\_\_\_\_\_\_\_\_\_\_\_/50**
* **Overall Score on Lab: \_\_\_\_\_\_\_\_\_\_\_\_\_**