

Dineage Joseph
Anatomy and Physiology
Ms. Francois
December 23, 2013

Lab #2 Skin Receptors
Lab Completed on 12/11/2013

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

Introduction: in this experiment we are finding out which part of the skin is most sensitive. We will use a pen and a ruler to measure how close my partner was when I touched her with the pen. We will use centimeters to measure the distance from the actual spot to the guessed spot.

Variables: Independent- Location of body parts
Dependent- Sensitivity of skin (levels)
Constants- Person, Pen

Hypothesis: If I poke the wrist, then it will be more sensitive because the wrist has a lot of nerves?

Equations: N/A

Materials: -Ruler
-Pen
-Lab Partner

Procedure: First with eyes closed have your lab partner touch your body part with the point of the pen gently. The touch should be gently where as not to hurt, but firm enough to leave a small mark. Then with their eyes still closed they must try to put their finger on the spot where the lab partner touched it with the pen. Once found they should hold it there. Have your partner measure the difference in the distance between the two spots. Then you would record data on the table. Repeat these steps until your entire table is completed. Once you've finished you would have to calculate the average of the distance for each body part.

Data:

location	Trail 1 left	Trail 2 left	Trail 1 right	Trail 2 right
Wrist	1 cm	2 cm	.5 cm	0 cm
elbow	0 cm	3 cm	1 cm	1 cm
Top of arm	.1 cm	1cm	4 cm	2 cm
Bottom of arm	1 cm	2 cm	2 cm	4 cm

Front of knee	0 cm	.5 cm	.5 cm	1 cm
Lower leg	11 cm	4 cm	3 cm	4.5 cm
Back of hand	3 cm	3 cm	0 cm	.5 cm

Palm of hand	3 cm	0 cm	0 cm	0 cm
chin	0 cm	0 cm	0 cm	0 cm
cheek	3 cm	4 cm	3 cm	4 cm
nose	.3 cm	0 cm	1 cm	1 cm
Upper back	8 cm	6 cm	3 cm	4 cm
Lower back	2 cm	1 cm	2 cm	1 cm
Tip of thumb	0 cm	0 cm	0 cm	0 cm

Discussion/ Conclusion: In my hypothesis, I stated that my wrist would be more sensitive than my other body parts. In this experiment my hypothesis was proven to be incorrect. This is evident through my data. For example my wrist had a lot of nerves in it which allowed me to touch the exact same spot that she did with the pen.

Overall, the experiment was successful. However there were some sources of error that did affect my results. One source of could be the fact that my wrist has more nerves than I thought. Another source of error would be the fact that I have a lot of thumb reflexes. There is a possibility that the poking was a little hard.

After having done this experiment some questions came into my head. I wonder what would happen if my partner poked the spots that didn't have that many nerves. I also wondered what would happen if I used a different poking utensil.

Name: Dinege Joseph

(9/2/10)

Period: 7

SCIENCE LAB REPORT RUBRIC

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Problem/Question	<input checked="" type="checkbox"/> Problem is correctly identified.	<input type="checkbox"/> Problem is sufficiently identified.	<input type="checkbox"/> Question is partially identified.	<input type="checkbox"/> Question is incorrectly identified.
Introduction	<input type="checkbox"/> State the goals and objectives of lab <input type="checkbox"/> Describes what data will be collected <input type="checkbox"/> Briefly summarizes experiment <input type="checkbox"/> Describe how that data will be used to arrive at conclusions at the completion of the laboratory.	<input type="checkbox"/> One key element is missing: <input type="checkbox"/> State the goals and objectives of lab <input type="checkbox"/> Describes what data will be collected <input type="checkbox"/> Briefly summarizes experiment <input type="checkbox"/> Describe how that data will be used to arrive at conclusions at the completion of the laboratory.	<input type="checkbox"/> Two key elements are missing: <input type="checkbox"/> State the goals and objectives of lab <input type="checkbox"/> Describes what data will be collected <input type="checkbox"/> Briefly summarizes experiment <input type="checkbox"/> Describe how that data will be used to arrive at conclusions at the completion of the laboratory.	<input type="checkbox"/> A confusing of misleading introduction missing more than 2 elements: <input type="checkbox"/> State the goals and objectives of lab <input type="checkbox"/> Describes what data will be collected <input type="checkbox"/> Briefly summarizes experiment <input type="checkbox"/> Describe how that data will be used to arrive at conclusions at the completion of the lab
Variables	<input checked="" type="checkbox"/> Independent var. <input checked="" type="checkbox"/> Dependent var. <input checked="" type="checkbox"/> controlled variable.	<input type="checkbox"/> One variable is missing: <input type="checkbox"/> Independent var. <input type="checkbox"/> Dependent var. <input type="checkbox"/> controlled variable.	<input type="checkbox"/> Two variables are missing: <input type="checkbox"/> Independent var. <input type="checkbox"/> Dependent var. <input type="checkbox"/> controlled variable.	<input type="checkbox"/> All variables are missing.
Hypothesis	<input type="checkbox"/> Link between problem and predicted results direct and relevant. <input type="checkbox"/> Use if-then-because <input type="checkbox"/> Ind & Dependent Variable featured	<input type="checkbox"/> Reasonable link between problem and predicted results. <input type="checkbox"/> Use if-then-because <input type="checkbox"/> Ind./Dep var featured	<input type="checkbox"/> Weak link between problem and predicted results. <input type="checkbox"/> Missing if-then-because <input type="checkbox"/> Missing ind./dep. var.	<input type="checkbox"/> Unreasonable link between problem and predicted results. <input type="checkbox"/> Missing if-then-because <input type="checkbox"/> Missing ind/dep var.
Materials and Procedure	<input checked="" type="checkbox"/> Includes list of all materials in bullets. <input checked="" type="checkbox"/> Procedure written in past tense <input checked="" type="checkbox"/> Does not use I, you, or we <input checked="" type="checkbox"/> Procedure in paragraph form using transition words <input checked="" type="checkbox"/> Specific <input type="checkbox"/> Refer to glassware instruments used <input type="checkbox"/> Includes any measurements <input type="checkbox"/> Paraphrased procedure in own words	<input type="checkbox"/> Includes list of most materials in bullets. <input type="checkbox"/> Procedure written in past tense <input type="checkbox"/> Does not use I, you, or we <input type="checkbox"/> Procedure in paragraph form w/ transition words <input type="checkbox"/> Missing some specifics <input type="checkbox"/> Refer to glassware instruments used <input type="checkbox"/> Includes any measurements <input type="checkbox"/> Procedure mostly paraphrased	<input type="checkbox"/> Includes list of some materials in bullets. <input type="checkbox"/> Procedure written mostly in past tense <input type="checkbox"/> Uses I, you, or we sometimes <input type="checkbox"/> Procedure in paragraph form w/ missing transition words <input type="checkbox"/> Missing specifics—not in order <input type="checkbox"/> Refer to glassware instruments used <input type="checkbox"/> Includes any measurements <input type="checkbox"/> Some of procedure paraphrased	<input type="checkbox"/> Includes list of a few materials in bullets. <input type="checkbox"/> Procedure not written in past tense <input type="checkbox"/> Uses I, you, or we <input type="checkbox"/> Not paragraph form/missing transition words <input type="checkbox"/> Missing specifics—not in order <input type="checkbox"/> Does not refer to glassware/instruments <input type="checkbox"/> Includes little measurements <input type="checkbox"/> Copied from the handout
Observations and Data Analysis/Calculations	<input checked="" type="checkbox"/> Observations are plentiful and specific for each experiment <input checked="" type="checkbox"/> Charts and graphs are recorded where necessary. <input checked="" type="checkbox"/> Data is properly recorded in a coherent table <input checked="" type="checkbox"/> Proper calculations are carried out. <input checked="" type="checkbox"/> Proper units are used.	<input type="checkbox"/> Missing one of the following: <input type="checkbox"/> Observations are plentiful and specific for each experiment <input type="checkbox"/> Charts and graphs are recorded where necessary. <input type="checkbox"/> Data is properly recorded in a coherent table <input type="checkbox"/> Proper calculations are carried out. <input type="checkbox"/> Proper units are used	<input type="checkbox"/> Missing two of the following: <input type="checkbox"/> Observations are plentiful and specific for each experiment <input type="checkbox"/> Charts and graphs are recorded where necessary. <input type="checkbox"/> Data is properly recorded in a coherent table <input type="checkbox"/> Proper calculations are carried out. <input type="checkbox"/> Proper units are used	<input type="checkbox"/> No data table present. <input type="checkbox"/> Observations are vague and unclear. <input type="checkbox"/> Calculations unclear or incorrect.

Name: _____

Period: _____

SCIENCE LAB REPORT RUBRIC

Discussion and Conclusion	<input type="checkbox"/> Restates hypothesis <input type="checkbox"/> States hypothesis is incorrect/correct <input type="checkbox"/> Data is analyzed thoroughly and correctly to support valid conclusions <input type="checkbox"/> 2 Sources of error in experiment explained <input type="checkbox"/> 2 ways to improve the experiment explained <input type="checkbox"/> Asks a new question <input type="checkbox"/> Makes a connection to how experiment could be used in life. <input type="checkbox"/> Written in 3 paragraphs	<input type="checkbox"/> One key element of conclusion is missing/not fully expanded <input type="checkbox"/> Restates hypothesis <input type="checkbox"/> States hypothesis is incorrect/correct <input type="checkbox"/> Data is analyzed thoroughly and correctly to support conclusions <input type="checkbox"/> 2 Sources of error in experiment explained <input type="checkbox"/> 2 ways to improve the experiment is explained <input type="checkbox"/> Asks a new question <input type="checkbox"/> Makes connection of how experiment could be used in life <input type="checkbox"/> Written in 3 paragraphs	<input type="checkbox"/> Two key elements of conclusion are missing: <input type="checkbox"/> Restates hypothesis <input type="checkbox"/> States hypothesis is incorrect/correct <input type="checkbox"/> Data is analyzed thoroughly and correctly to support valid conclusions <input type="checkbox"/> 2 Sources of error in experiment explained <input type="checkbox"/> 2 ways to improve the experiment is explained <input type="checkbox"/> Asks a new question <input type="checkbox"/> Makes a connection to how experiment could be used in life <input type="checkbox"/> Written as one paragraph	<input type="checkbox"/> Paraphrases manual with little data analysis <input type="checkbox"/> Conclusions may be wrong or data misinterpreted. <input type="checkbox"/> Written as one paragraph or written in bullet points <input type="checkbox"/> More than two key elements missing from conclusion.
----------------------------------	--	--	---	---

Category	Excellent (4 pts)	Proficient/Good (3 pts)	Developing (2 pts)	Needs Revision (1 pt)
Student's transitions are	... varied and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.	... varied and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.	... appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.	... inappropriate and ineffective transitions in attempt to create cohesion and clarify the relationship between ideas.
Student's word choices show	... precise language, science-specific vocabulary to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the experiment's context as well as to the level of knowledge of readers.	... precise language and science-specific vocabulary to manage the complexity of the experiment's context as well as to the level of knowledge of likely readers.	... precise language and age-appropriate vocabulary to inform about or explain the experiment completed.	... imprecise language and age-appropriate vocabulary to inform the reader about the experiment.
Student's tone	... is formal, objective, and established early and maintained throughout the lab report.	... is formal and/or objective, and may occasionally become informal/subjective without hindering the overall integrity.	... is provides for a formal style and objective reading.	... is established but is neither formal nor objective.
Student's illustration	Drawing goes beyond in a significant way, e.g. drawing is particularly clear, colorful	Drawing is neat, easy-to-read, and completely labeled.	Drawing is missing key labels; is sloppy; is misleading.	Drawing missing, illegible, or not included.
Student's quality of writing	No spelling/ grammar (s/g) errors.	Few s/g errors.	Some spelling/grammar errors.	Many errors.
Student's presentation	Extremely neat, organized, and presentable	Looks OK	A really rushed job	Completely illegible
Student's professionalism	Handed in on time	Handed in one day late	Handed in two days late	Handed in more than two days late

TOTAL SCORE ON REFLECTION: 51 / 56 (+ 2/- 2) points for heading

SCORE = _____