**9 SCIENCE BIOLOGY ASSIGNMENT**

[](http://www.google.com.au/imgres?imgurl=http://www.recruiter.com/i/wp-content/uploads/2013/08/CURIOUS-INTERESTED-CAT-DOCTOR.jpg&imgrefurl=http://www.recruiter.com/i/we%E2%80%99re-interested-really-means-what%E2%80%949-kinds-of-interest-you-need-to-distinguish/&h=900&w=900&tbnid=1db40oenmDYzlM:&zoom=1&q=cat%20doctor&docid=HXVVIXheb0NeSM&ei=ZsvRU8CcLdKJuAT_-YHQCg&tbm=isch&ved=0CF0QMyg3MDc&iact=rc&uact=3&dur=118&page=2&start=47&ndsp=45)

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher:\_\_\_\_\_\_\_\_\_\_\_\_

Form:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due date:\_\_\_\_\_\_\_\_\_\_\_

**Aim:** This assignment will allow you to find out about touch receptors and how the nervous system works in the human body.

**IMPORTANT INFORMATION**

**Plagiarism**

You must write in your own words not copy sentences word for word from another student or another source.

Plagiarising = instant zero on assignment and you will have to re-do it.

**How to reference a book:**

Tsutaya, K. (2011). Crafting with Cat Hair: Cute Handicrafts to Make with Your Cat. Philadelphia: Quirk Books.

Author’s last name, first letter of first name. (Year of publication). Title of book. Place of publication: name of publisher.

**How to reference a web site:**

Rice, C. (2013). Cute cats could be key to learning new languages. Retrieved February 8, 2014 from [www.bbc.co.uk/news/technology-25103362](http://www.bbc.co.uk/news/technology-25103362)

Author’s last name, first letter of first name. (Year of publication). Title of website. Date you retrieved the information, website

**Assessment policy**

Have sick note/legitimate reason from parent = new negotiated due date.

Assignment not submitted on due date and no sick note from parents = -20% mark

Assignment not submitted on new negotiated due date = -40% mark

+ Letter home to parents

+ Must attend academic completion to complete assignment

**OR**

Submit assignment to student services before academic completion date and academic completion not necessary.

Academic completion not attended = zero on assignment + Saturday detention

**If you know that you cannot submit your assignment on the due date, let your teacher know BEFORE the due date (email them if you are not in school) or just email them your assignment the night before.**

**PART ONE: BACKGROUND RESEARCH**

1. **Explain** what touch receptors are and what they do. (2 marks)

(Minimum of two sentences)

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2. **State** one area of the body where you would find a high concentration of touch receptors and **explain** why this is the case. (2 marks) (Minimum of two sentences).

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3. **State** one area of the body where you would find a low concentration of touch receptors and **explain** why this is the case. (2 marks) (Minimum of two sentences).

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4. **List** three stimuli that your touch receptors can detect. (2 marks)

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**5.** There are two main groups of touch receptors. **List** them and **state** what each type detects.(2 marks)

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**References** (minimum two references)

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**PART TWO: EXPERIMENT**

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**Aim:** To investigate what parts of the body have a greater concentration of touch receptors.

Note: when the subject feels two pin pricks from two pins placed 2mm apart, two nerves have been stimulated. This means that the receptors are no more than 2mm apart. Feeling only one pin prick indicates fewer receptors, spaced more widely.

**Hypothesis**

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**Materials**

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**Independent variable:**

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**Dependent variable:**

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**Two controlled variables:**

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**Method**

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**Results:** Table (show results taken from students in group).

**Graph** (graph the average results from your group on a piece of graph paper and attach to the booklet).

**Discussion** (describe one mistake/error that occurred, explain how this affected the results and how it could be avoided next time).

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1. **State** the areas of the body you tested that had the greatest concentration of touch receptors. (1 mark)

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2. **State** the area of the body you tested that had the lowest concentration of touch receptors. (1 mark)

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**Conclusion**

(State general result, whether hypothesis was proven or disproven and use scientific reasons to explain why you got the results you did **or** why you would have expected different results).

(Minimum of 5 sentences)

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**MARKING KEY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Content** | **Description** |  | **Your**  **mark** |
| Background  research | Questions | 10 |  |
| Referencing | Minimum of 2 references.  Minimum 2 types of sources.  Referenced in correct format as shown in student diary | 1  1  1 |  |
| Title | Explains what the investigation is about –  NOT ‘Biology Investigation’ | 1 |  |
| Materials | Listed all materials used.  Is specific – has number of items used. Eg 5g of salt | 0.5  0.5 |  |
| Hypothesis | Clear statement predicting one variable changing.  Does not use ‘I’, ‘we’ etc. | 1  1 |  |
| Independent  Variable | Listed the independent variable. | 1 |  |
| Dependent  Variable | Listed the dependent variable. | 1 |  |
| Controlled  Variables | Listed at least two controlled variables. | 2 |  |
| Method | Is written in past tense.  Is written in numbered step-by-step.  Includes all the steps completed in experiment. | 1  1  1 |  |
| Results  table | Drawn neatly in pencil and using a ruler.  Includes the headings and units of measurement.  Includes all the data collected during the experiment. | 1  1  1 |  |
| Graph |  | 5 |  |
| Discussion | Describes at least one mistake/error that occurred.  Explains how this mistake/error affected the results.  Explains how this mistake/error could be avoided. | 1  1  1 |  |
| Discussion  Questions |  | 2 |  |
| Conclusion | One sentence stating the result of the experiment.  One sentence stating whether the hypothesis was supported  or disproved.  Scientific reasons to explain results. | 1  1  3 |  |
| Presentation | Correct spelling, grammar, full sentences.  Written neatly or typed up neatly. | 1  1 |  |
| **Total mark** | | 44 |  |

Mark as percentage %

Teacher’s comments:

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