How does our nervous system process information?

* NGSS MS-LS1-8 - Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

**Directions:** Create an individual research report on how we respond to stimuli and store memories in the brain.

**Content Vocabulary:**

|  |  |  |  |
| --- | --- | --- | --- |
| stimulus | response | receptors | interneuron |
| cerebrum | sensory neurons | motor neurons | spinal cord |

**Requirements:**

* The report should follow a 5-paragraph APA essay format with an introductory paragraph, three body paragraphs, and a conclusion paragraph.
* A Reference (bibliography) page should be attached.
* Body paragraphs should stick to topics that include how we respond to stimuli and/or how the brain stores memories.
* Content vocabulary should be included (and used to limit the depth and direction of the report).
* Notes must be taken and turned in on forms provided.
* At least 3 sources must be used and can include reliable websites, professional brochures, Science texts, and credible movie clips.
* Formal writing style should be used.
* The report and the references must be typed.
* A graphic/picture should be included on the first page. The graphic should be an example to explain what is in the written report. The graphic should be right justified and text should wrap around it.

**What to do:**

Day 1: Watch the video clip and share in the class discussion on the Nervous system. After the discussion and video, list topics that you would be interested in researching.

Day 2-4: (Computer Lab)

* Use the Topic note-taking sheet and research the topics that you have chosen. Put one topic on each page. Put notes from sources in separate boxes and include the bibliography information.
* Find the picture you would like to use and save it on your flash drive.

Day 4 Homework: Write the rough draft.

Day 5: Type the report and the references. Remember to add the picture.

Day 5 Homework: Do the self-evaluation.

Day 6: Report is due. Grade sheet should be attached to the front.

Pre Research (gathering thoughts)

My research report will be about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Subtopics I’d like to research include (reminder, you’ll have 3 body paragraphs, so pick three subtopics)

* Parts of the nervous system
* What happens when a hot pan is touched?
* Are there the same number of sensory nerves in all areas?
* What happens when a concussion occurs?
* How does the skin sense different temperatures?
* Which parts of the brain store memory?
* What nerve cells look like and how they function
* What is phantom pain?
* How do pain blockers work?
* What is the difference in short term and long term memory storage?
* What keeps me breathing while I’m sleeping?
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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References

Every time you take a note from a source, write down the reference material. We will be using APA format, so the information you will need (if it is available) is

|  |  |  |
| --- | --- | --- |
| Title of document | url address | date published |
| Author | date accessed | publisher and location |

<http://www.libraries.psu.edu/psul/researchguides/citationstyles/APA_citation.html#apa-citation> will help answer questions and show how it is written.

You may use a website to generate your reference list. Be sure to title the page References, alphabetize your sources, and write them in correct APA format.

Notes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Source:

Topic\_\_\_Topic

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Research Paper Grade Sheet

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|  | **Self Evaluation** | **Teacher Evaluation** |
| Information covers topics on how the nervous system processes information | Subtopic 1 \_\_\_\_\_/5  Subtopic 2 \_\_\_\_\_/5  Subtopic 3 \_\_\_\_\_/5 | Subtopic 1 \_\_\_\_\_/5  Subtopic 2 \_\_\_\_\_/5  Subtopic 3 \_\_\_\_\_/5 |
| Content specific vocabulary is used correctly | \_\_\_\_\_/5 (List words here) | \_\_\_\_\_/5 |
| Notes are taken from at least two sources per topic (possible 2pt extra for a credible third source per topic) | Subtopic 1 \_\_\_\_\_/4  Subtopic 2 \_\_\_\_\_/4  Subtopic 3 \_\_\_\_\_/4  (add 2pt for a third source) | Subtopic 1 \_\_\_\_\_/4  Subtopic 2 \_\_\_\_\_/4  Subtopic 3 \_\_\_\_\_/4  (add 2pt for a third source) |
| Information from 2 or more sources is synthesized into a paragraph | Body Paragraph 1 \_\_\_\_\_/4  Body Paragraph 2 \_\_\_\_\_/4  Body Paragraph 3 \_\_\_\_\_/4 | Body Paragraph 1 \_\_\_\_\_/4  Body Paragraph 2 \_\_\_\_\_/4  Body Paragraph 3 \_\_\_\_\_/4 |
| Intro paragraph tells the reader what the paper is about | \_\_\_\_\_/5 | \_\_\_\_\_/5 |
| Formal writing style is used which includes: | |  |
| correct grammar | \_\_\_\_\_/2 | \_\_\_\_\_/2 |
| correct spelling | \_\_\_\_\_/2 | \_\_\_\_\_/2 |
| written in third person | \_\_\_\_\_/2 | \_\_\_\_\_/2 |
| grade level vocabulary | \_\_\_\_\_/2 | \_\_\_\_\_/2 |
| Conclusion paragraph restates report topic. | \_\_\_\_\_/5 | \_\_\_\_\_/5 |
| Report and references are typed | \_\_\_\_\_/5 | \_\_\_\_\_/5 |
| Includes graphic that helps present text | \_\_\_\_\_/2 | \_\_\_\_\_/2 |
| Graphic is right justified with wrapped text | \_\_\_\_\_/1 | \_\_\_\_\_/1 |
| Total | \_\_\_\_\_\_\_/70 | \_\_\_\_\_\_\_\_/70 |