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Phil-cad Academician Publishing



Republic of the Philippines  
Department of Education  
Region I  
Schools Division Office I of Pangasinan  
**NIÑOY ELEMENTARY SCHOOL**  
Aguilar

# STRATEGIC INTERVENTION MATERIAL

## Brain at Work **SCIENCE 4**



*Dr. Jennifer R. Campos*

# **Strategic Intervention Material (SIM)**

## **Science 4**

Published by **Phil-cad Academecian Publishing**  
Block 20 Lot 7, Purok Rosal, Brgy. Datu Esmael-H1 Dasmariñas  
City, Cavite, 4114, Philippines



# **Strategic Intervention Material (SIM) Science 4**



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**JENNIFER R. CAMPOS**



Republic of the Philippines  
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**NIÑOY ELEMENTARY SCHOOL**  
Aguilar

## PREFACE

Education is a cornerstone of personal and societal growth, and teaching methodologies continually evolve to ensure meaningful and engaging learning experiences. This Strategic Intervention Material (SIM) for Grade 4 Science embodies this commitment to innovation in education.

Designed to support learners who may struggle with specific concepts, this SIM provides a carefully curated set of lessons and activities tailored to enhance understanding and application of key scientific principles. It aligns with the curriculum standards and promotes active engagement, critical thinking, and hands-on learning.

In this material, you will find a seamless blend of theoretical knowledge and practical exercises aimed at fostering curiosity and a deeper appreciation for science. May it inspire young minds to explore, question, and discover the wonders of the natural world.

Dr. Jennifer R. Campos  
Author



Republic of the Philippines  
Department of Education  
Region I  
Schools Division Office I of Pangasinan  
**NIÑOY ELEMENTARY SCHOOL**  
Aguilar

## ACKNOWLEDGEMENT

I extend my heartfelt gratitude to the Department of Education, Region I, and the Schools Division Office of Pangasinan 1 for their unwavering support and guidance throughout the development of this Strategic Intervention Material (SIM).

To Niñoy Elementary School, Aguilar, and its dedicated teachers, your encouragement and collaboration were instrumental in bringing this endeavor to life. Your passion for education and commitment to the growth of every learner have been truly inspiring.

I also express my sincere appreciation to the authors and researchers whose works served as valuable references. Your contributions have greatly enriched this material.

This SIM would not have been possible without your collective support. Thank you for empowering this initiative to help Grade 4 learners discover and appreciate the wonders of science.

Dr. Jennifer R. Campos  
Author



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Department of Education  
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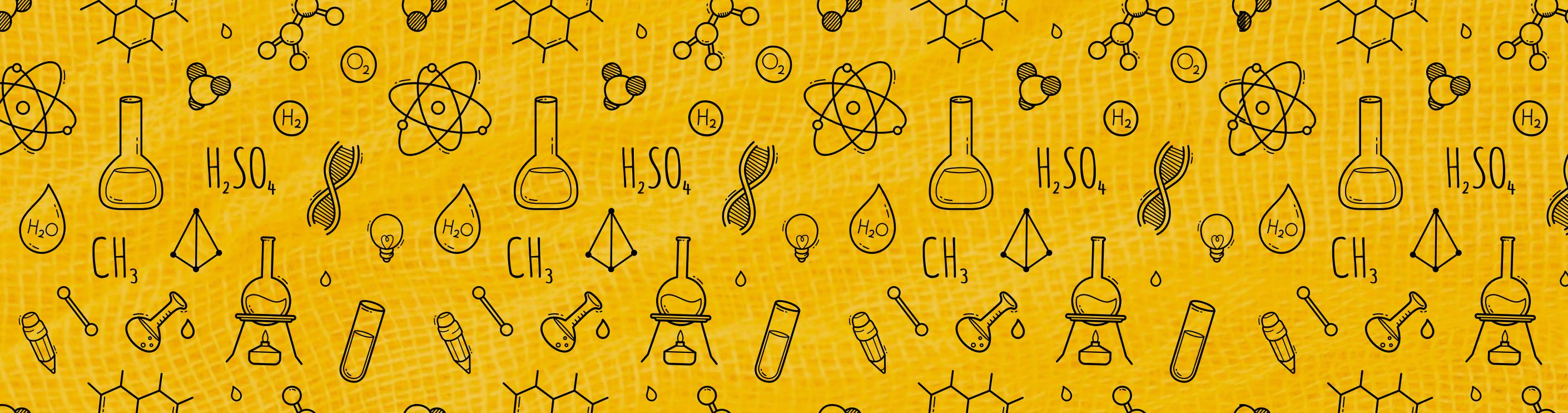
## OVERVIEW

This Strategic Intervention Material (SIM) will help you understand the main parts of the human brain and its functions.

The brain is an amazing three-pound organ that controls all functions of the body, interprets information from the outside world, and embodies the essence of the mind and soul. Intelligence, creativity, emotion, and memory are a few of the many things governed by the brain. Protected within the skull, the brain is composed of the cerebrum, cerebellum, and brainstem.

The brain receives information through our five senses such as sight, smell, touch, taste, and hearing - often many at one time. It assembles the messages in a way that has meaning for us, and can store that information in our memory. The brain controls our thoughts, memory and speech, movement of the arms and legs, and the function of many organs within our body.

After completing this lesson, you will be able to determine the main parts of the brain and its functions.



## SUB-TASKING

### Learning Competency:

Describe the main function of the major organs (Brain)  
(S4LT-IIa-b-1)

## OBJECTIVES

1. Identify the main parts of human brain;
2. Give the function of each part of the brain; and
3. Practice the health habits for the brain.

# FORM 1

## CONTEXTUALIZED LEARNING RESOURCE MATERIAL

- 1. Learning Resource Title** : BRAIN AT WORK
- 2. Learning Resource Writer/ Developer** : DR. JENNIFER R. CAMPOS  
*(Teacher III)*
- 3. Learning Resource Material Type** : LEARNER'S RESOURCE, SIM

### 4. Basis of Development of Learning Resource Materials:

#### IDENTIFIED LEAST LEARNED COMPETENCY (MELCS- BASED)

### 5. Budgetary Requirements: N/A

### 6. Learning Resource Utilization Plan:

The proposed Strategic Intervention Material titled "Brain at Work" focuses on the different classification of invertebrate's animals. This initiative addresses the least mastered skills in Science for Grade 4 learners at Ninoy Elementary School, Brgy. Ninoy, Aguilar, Pangasinan. The material aims to enhance learners' understanding and equip them with the necessary knowledge and skills on the topic through engaging and informative content that fosters both knowledge and appreciation for human beings.

The subtasks presented are aligned with Bloom's Taxonomy, encompassing cognitive, psychomotor, and affective domains. This alignment ensures a holistic approach to learning, promoting critical thinking and understanding (cognitive), hands on skills (psychomotor), and emotional engagement (affective) in the study of the brain parts and its functions.

To effectively utilize the proposed Strategic Intervention Material (SIM), the developer carefully designed each component/part to meet the needs and expectations of learners according to their level. These parts are the following.

#### A. GUIDE CARD:

This section provides a thorough and comprehensive overview of the entire material on the brain parts and its functions. It highlights and briefly discusses the various parts and functions of the human brain, ensuring clarity, comprehension and engagement of learners on the topic.

# FORM 1

## B. ACTIVITY CARD:

The activities on the activity card are aligned with the three domains of learning thereby targeting the development of the learners` holistically.

## C. ASSESSMENT CARD

To gauge learners` understanding, an assessment card with aligned questions is provided. This section allows a clear evaluation of their knowledge and understanding of the material.

## D. ENRICHMENT CARD

To enhance understanding of the lesson, learners are encourage to find the functions of each part of the brain through a fill in the blanks question. Such activity gauges pupils` retention on the concepts discussed in the SIM.

## E. ANSWER KEY CARD

This section provides key answer for the activities, one assessment, one enrichment activity, ensuring clarity and supporting learners in reviewing their understanding.

## F. REFERENCE CARD

### 1. TEXTBOOKS/SLM

- Baylon, Cristina S. 2007. *Science and Life Revised Edition*
- Taganahan, Vielka B. 2020. *ADM Quarter 2 Module 1: Human Sense Organs*

### Participants and other Sources of Data and Information

The study will employ complete enumeration, selecting participants who did not meet the passing percentage. The target subjects will be the current Grade 4 learners at Niñoy Elementary School.

### Data Gathering Method

The teacher -writer will request permission from the school head to develop a Strategic Intervention Material (SIM). She will seek TA from the Master Teachers and ICT School Coordinator who will examine the content, language and layout of the material. Once approved, the teacher will seek permission from the parents of the identified learners to conduct a 30-minute remediation session after their regular class hours using the SIM.

# FORM 1

The proposed learning resource will undergo validation in the School and District Level Quality Assurance Team Experts, to ensure serving its purpose for the Grade 4 learners.

The identified slow learners will take pre-tests and post-test to compare their performance before and after utilizing the SIM.

Upon completion and approval of the Strategic Intervention Material in Science 4 at the Division Level, it will presented during SLAC Sessions, Mentoring Sessions and INSET. The results and findings will inform strategies for improving learner's performance in Science and copies of the Learning Resource Material will also be distributed in Science Teachers for classroom use. The hard copies of the learning Resource Material will also be discussed and distributed to Science teachers for classroom use.

Prepared by:

**DR. JENNIFER R. CAMPOS**

Writer/ Developer

Noted by:

**GLORY T. JOVEN, DA**

Principal II

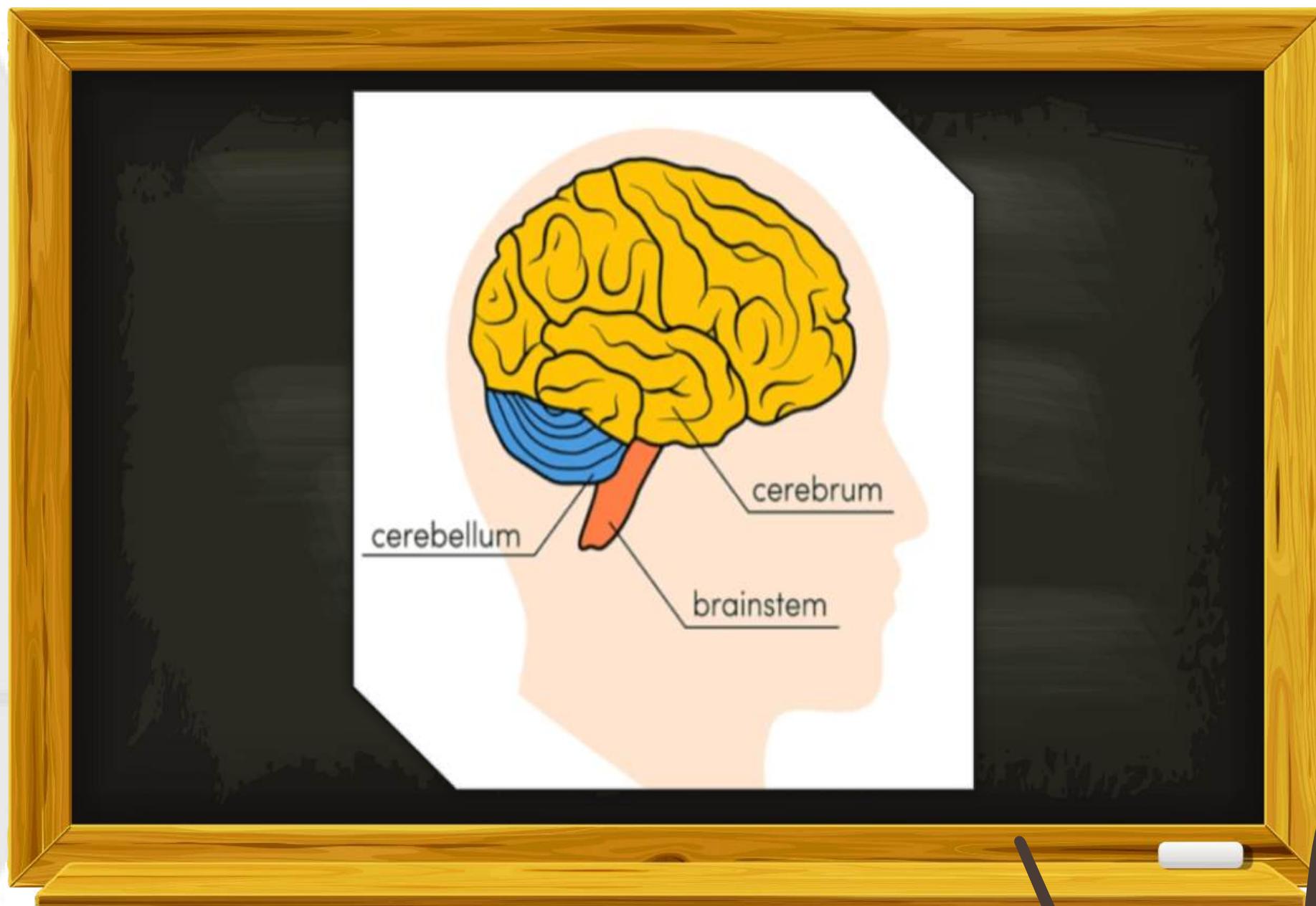


Address: Alvear St. Lingayen, Pangasinan  
Telephone No.: (075)-522-2202  
Email: pangasinan1@deped.gov.ph

# GUIDE CARD

Learning Competency:

Describe the main function of the major organs (Brain)  
(S4LT-IIa-b-1)



**HI KIDS!  
DO YOU KNOW WHAT IS IN THE PICTURE?**

**IT'S A HUMAN BRAIN**

**YES, IT'S CORRECT,  
IT'S A HUMAN BRAIN.  
VERY GOOD!**

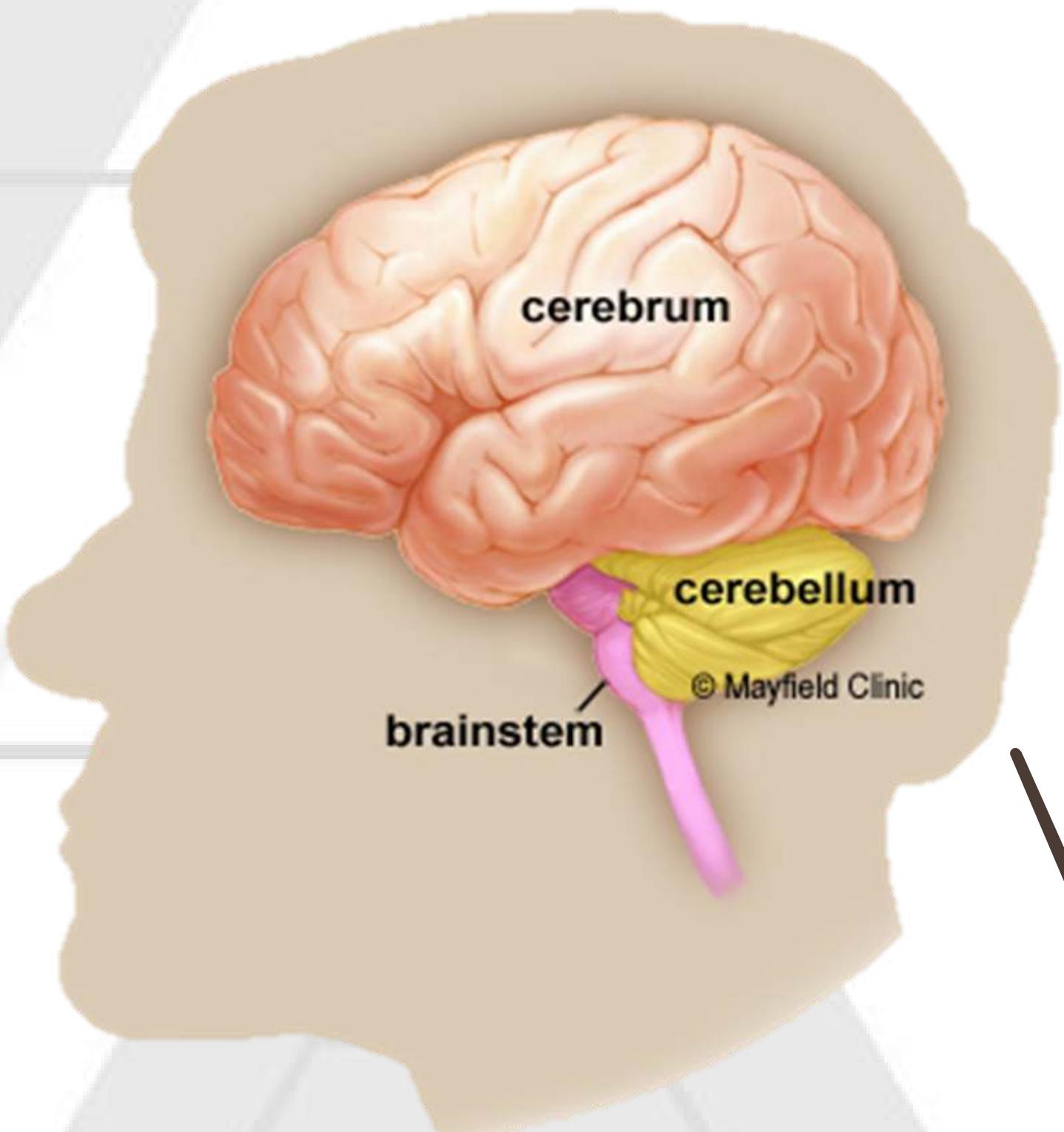


# GUIDE CARD

Learning Competency:

Describe the main function of the major organs (Brain)  
(S4LT-IIa-b-1)

**THE BRAIN HAS THREE MAIN PARTS,  
THE CEREBRUM, THE CEREBELLUM, AND  
THE BRAINSTEM.**

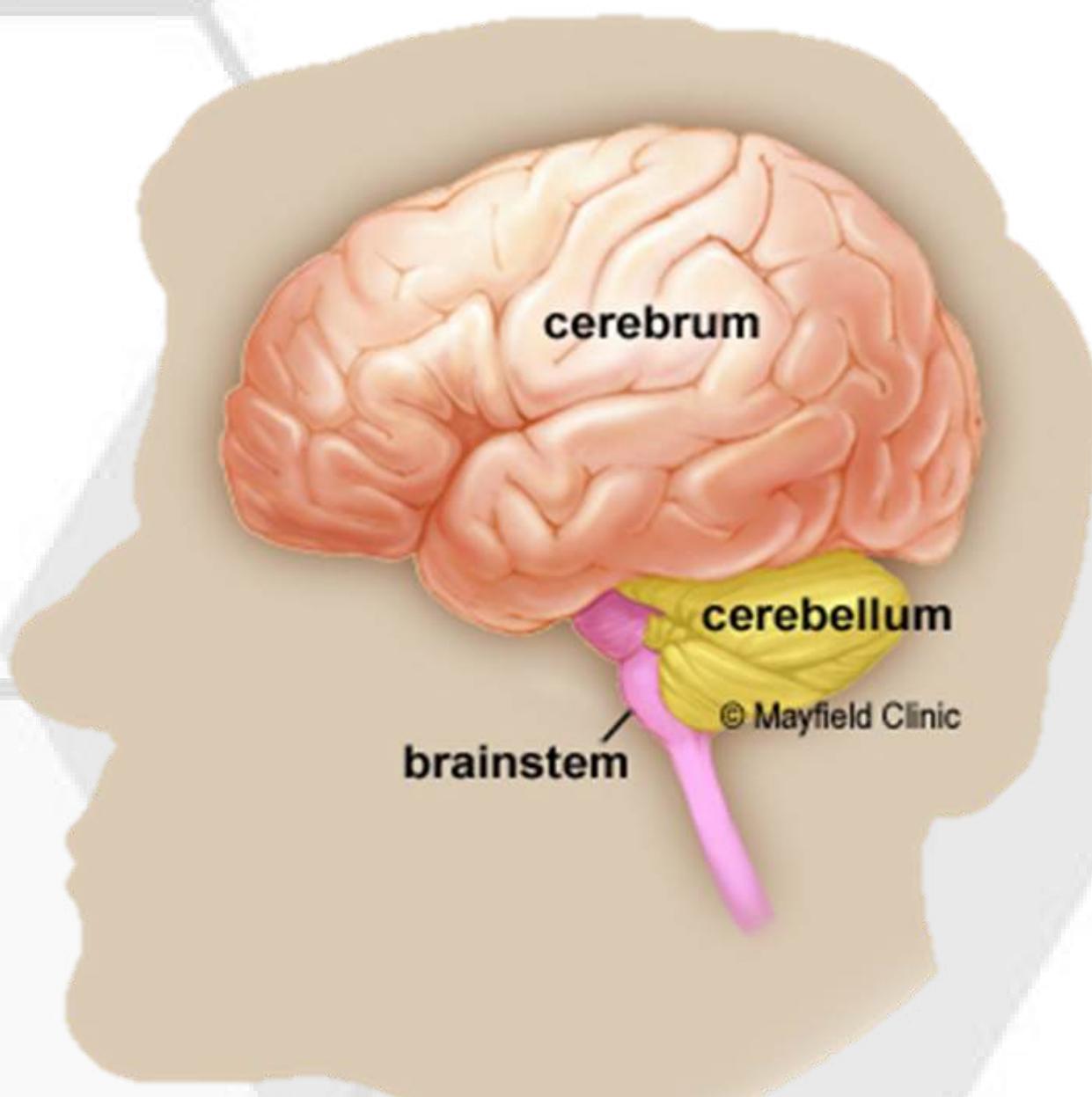


# GUIDE CARD

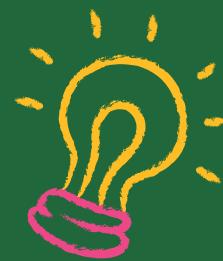
**CEREBRUM:** IT IS THE LARGEST PART OF THE BRAIN AND COMPOSED OF RIGHT AND LEFT HEMISPHERES. IT PERFORMS HIGHER FUNCTIONS LIKE INTERPRETING TOUCH, VISION AND HEARING, AS WELL AS SPEECH, REASONING, EMOTIONS, LEARNING, AND FINE CONTROL OF MOVEMENT.

**BRAINSTEM:** IT ACTS AS A RELAY CENTER CONNECTING THE CEREBRUM AND CEREBELLUM.

**CEREBELLUM:** IT IS LOCATED UNDER THE CEREBRUM. ITS FUNCTION IS TO COORDINATE MUSCLE MOVEMENTS, MAINTAIN POSTURE, AND BALANCE.



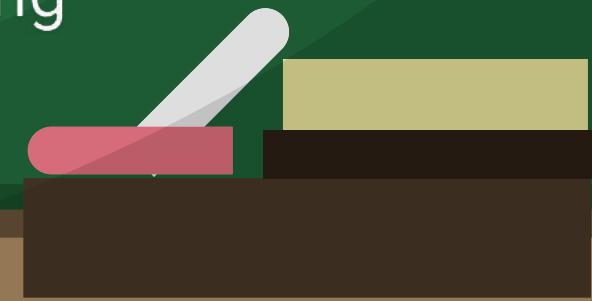
# GUIDE CARD



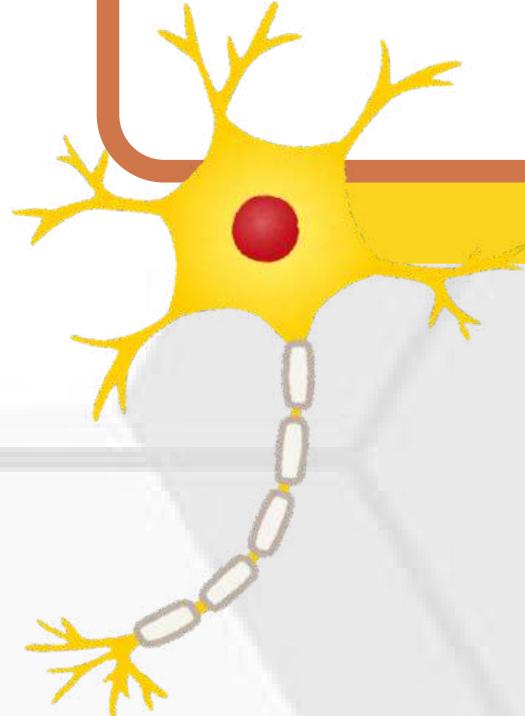
## FUNCTION OF THE HUMAN BRAIN



1. It controls the voluntary activities of the body like thinking, solving problems, and memorizing details and decisions.
2. It controls the muscle movement of our body like walking and writing.
3. It coordinates muscular actions.
4. It is responsible for man's ability to learn habits and develop skills.
5. It helps maintain a person's sense of balance.
6. It connects the brain to the spinal cord.
7. It controls the involuntary muscles of the body and coordinate functions like beating of the heart and breathing

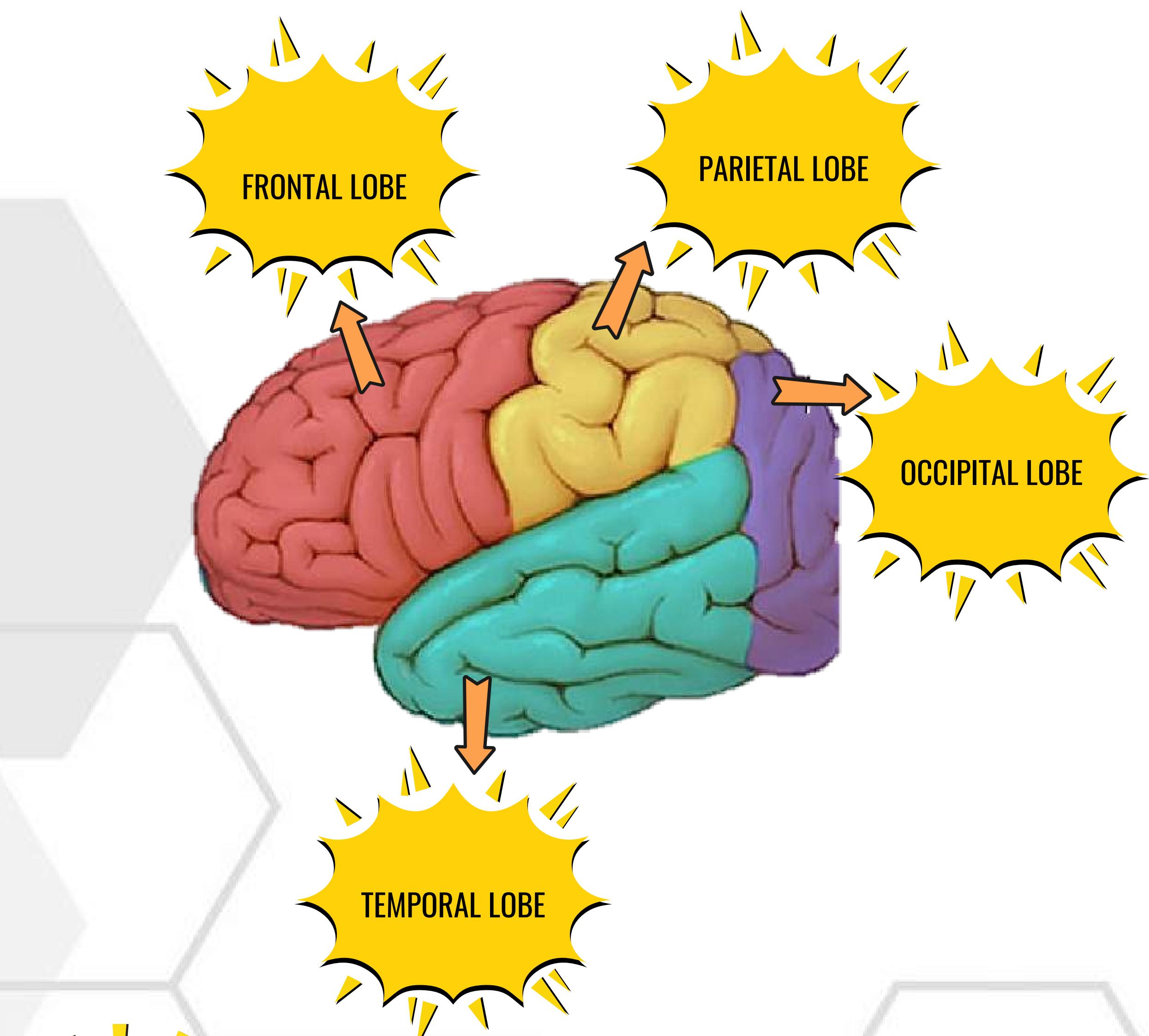


**THE MAIN FUNCTION OF THE BRAIN IS TO PROCESS INFORMATION IT RECEIVES AND TO SEND INSTRUCTIONS TO THE DIFFERENT PARTS OF THE BODY.**



# GUIDE CARD

## BRAIN LOBES AND ITS FUNCTIONS



### **1. Frontal Lobe**

It is important for cognitive functions and control of voluntary movement or activity.

### **2. Parietal Lobe**

It processes information about temperature, taste, touch and movement.

### **3. Occipital Lobe**

It is primarily responsible for vision.

### **4. Temporal Lobe**

It processes memories, integrating them with sensations of taste, sound, sight and touch.

# GUIDE CARD

## SIMPLE TIPS FOR A HEALTHY BRAIN



1

**Sleep** - Getting the right amount of sleep will help the brain be at its peak when processing information. Sleep allows the brain to repair itself and therefore to be fully fit for the task of learning and remembering. While you sleep the brain secretes melatonin, a substance that repairs cells.

2

**Exercise** - Promotes the release of brain-derived neurotrophic factor (BDNF), which supports brain plasticity, improving learning and memory.

3

**Nutrition** - A diet healthy in vitamins, anti-oxidants, omega 3 essential fatty acids and balanced amounts of protein and carbohydrates will allow for the complex requirements of brain function to be maximised. A large part of your brain is made of DHA- an Omega 3 essential fatty acid, so if you can't obtain Omega 3s, B vitamins and anti-oxidants from your diet, consider buying some trusted brand supplements.

4

**Avoid Harmful Substances** - Substances that are harmful to the brain include any illicit drug, alcohol, too much coffee and foods high in fat

5

**Mindfulness Meditation** - Research found the benefits of daily meditation. It's quick, fun, and easy to do.

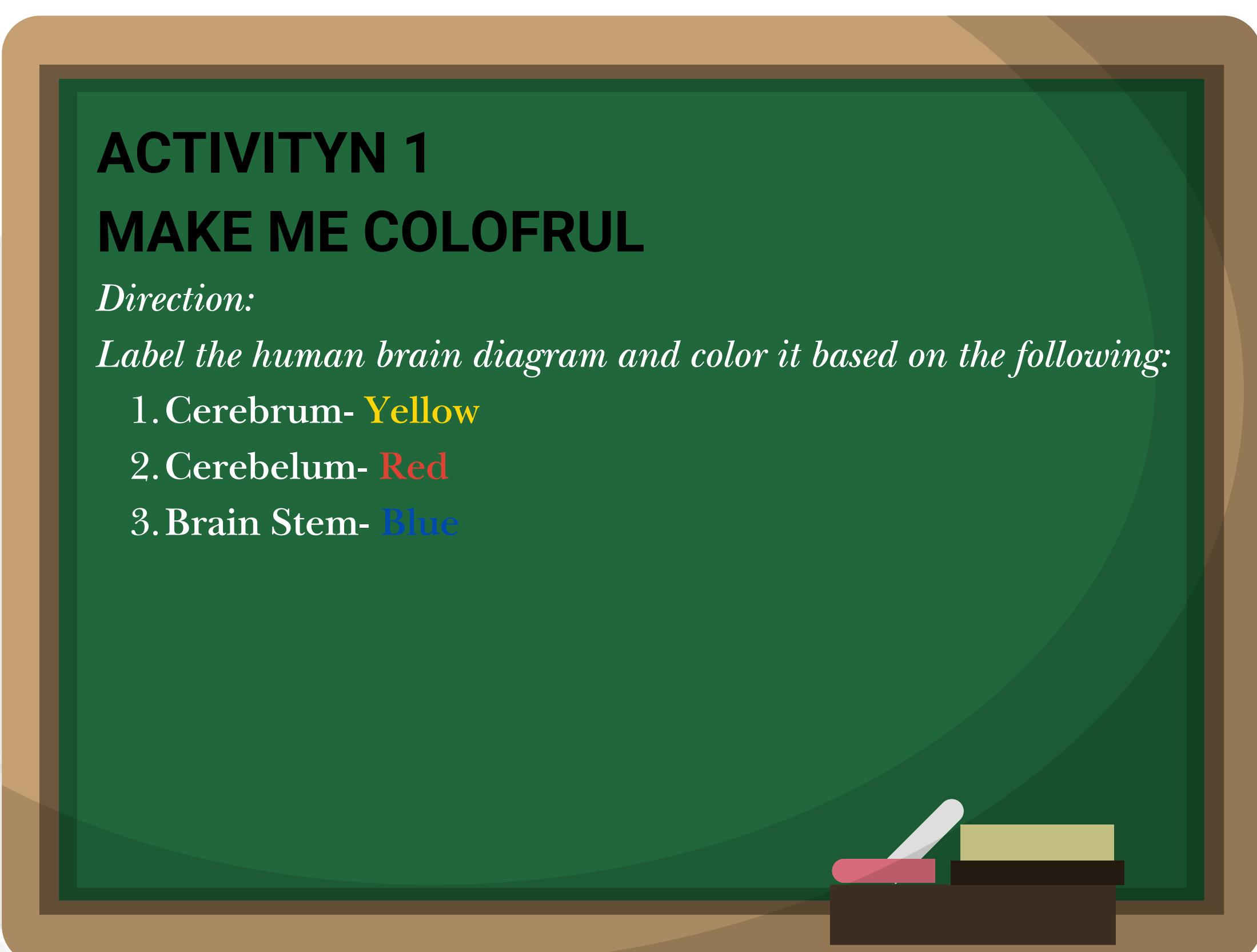
# ACTIVITY CARD

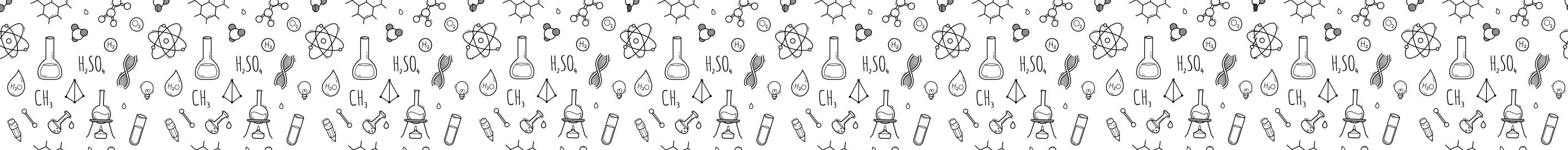
## ACTIVITYN 1 MAKE ME COLOFRUL

*Direction:*

*Label the human brain diagram and color it based on the following:*

1. Cerebrum- Yellow
2. Cerebellum- Red
3. Brain Stem- Blue

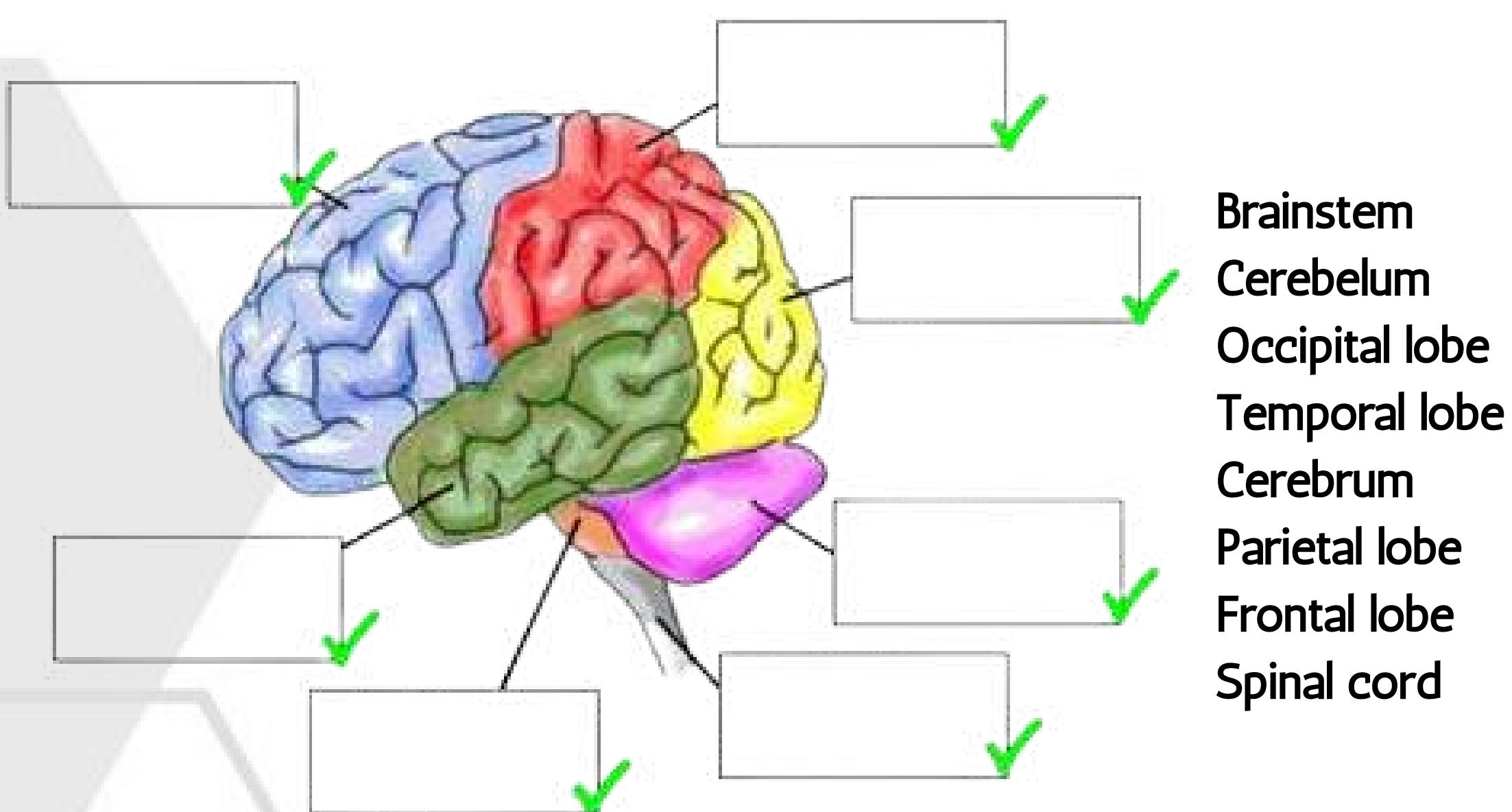




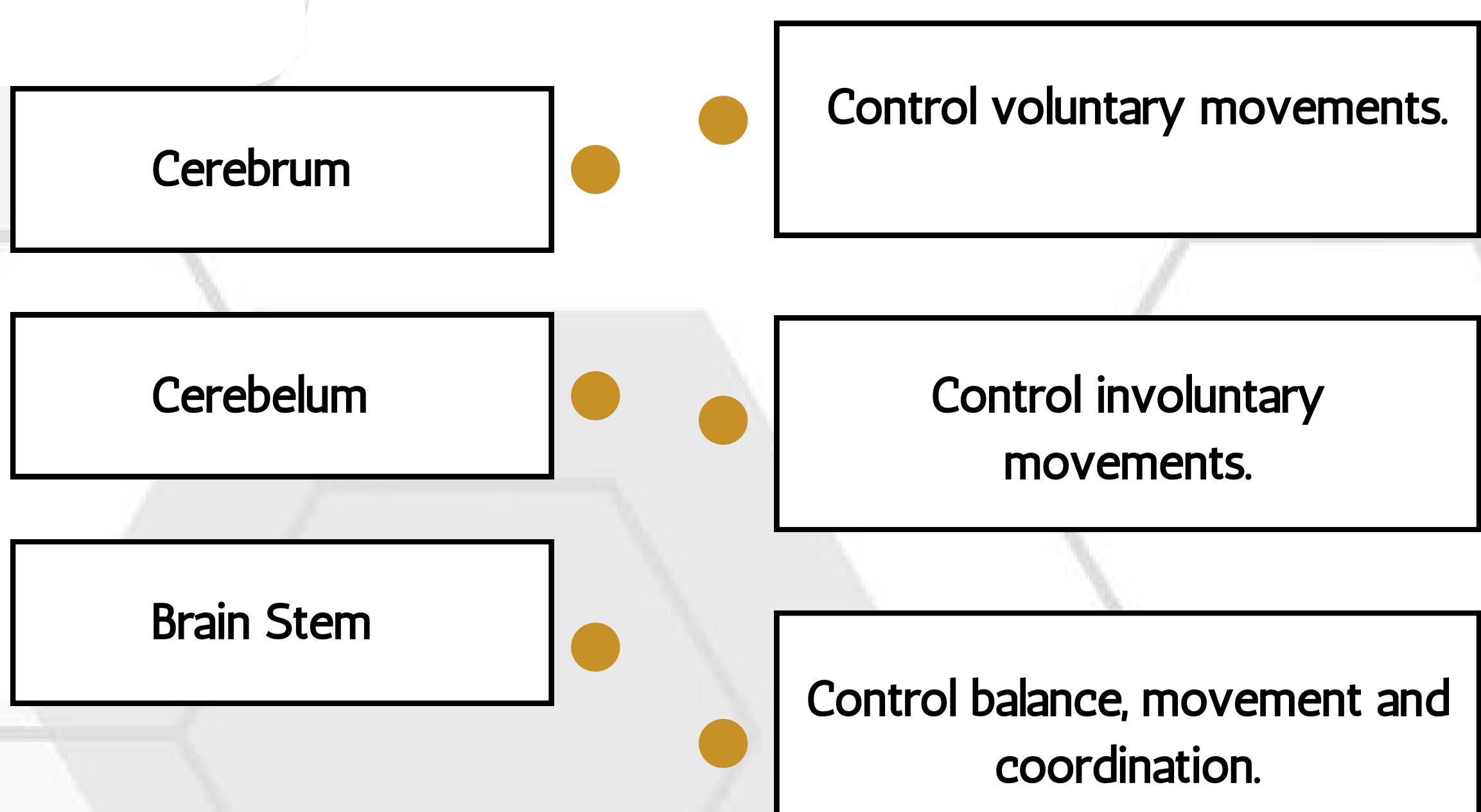
# ACTIVITY CARD

## ACTIVITYN 2

A. Direction: Label the different parts of the brain on the diagram.



B. Read and Match.



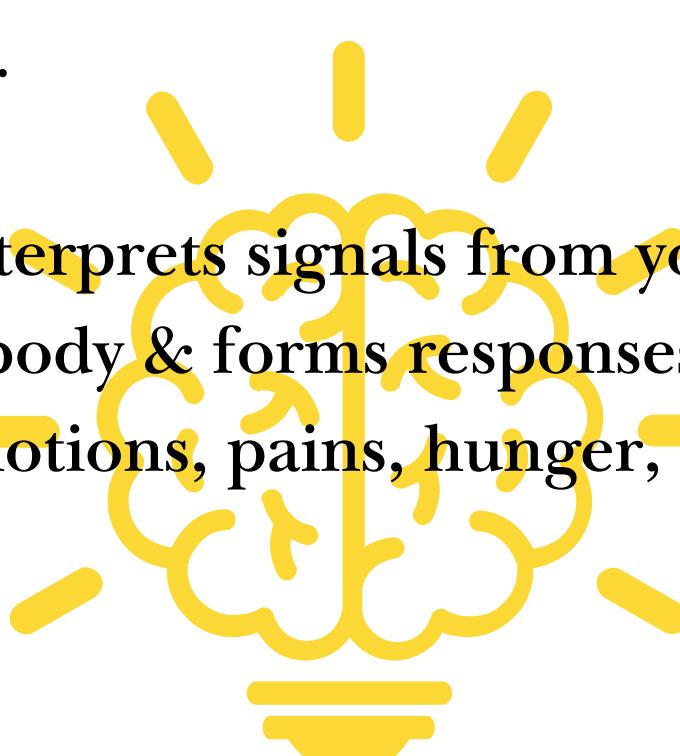
# ACTIVITY CARD

## ACTIVITYN 3

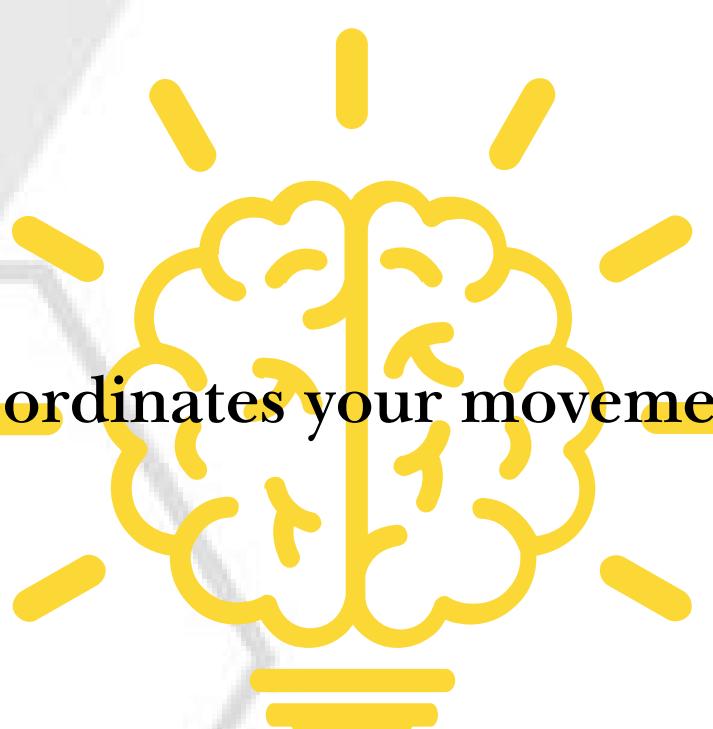
### Find Me.....Just a Thought

Can you find the human brain related words in the table? Use the clues of function to help you. Encircle the word.

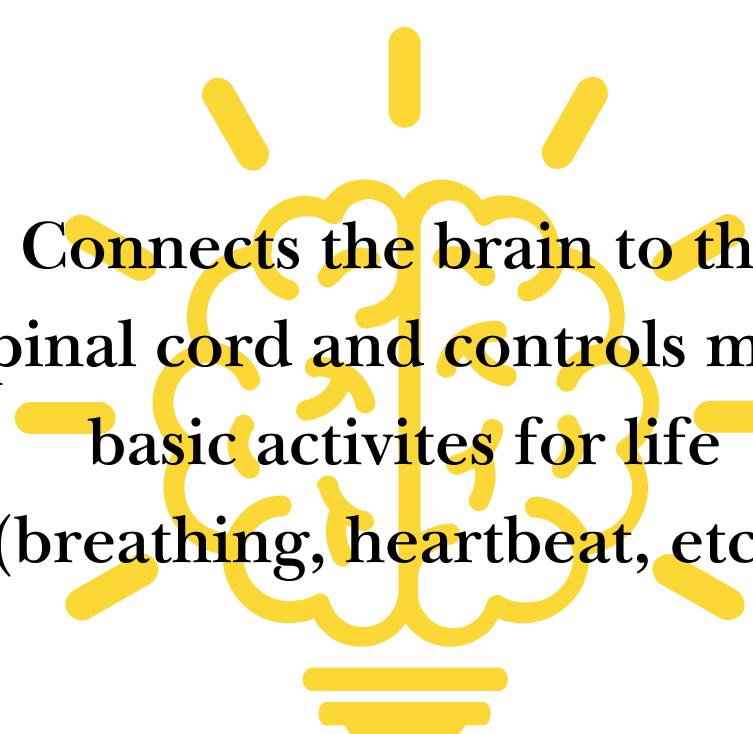
Interprets signals from your body & forms responses, emotions, pains, hunger, etc.



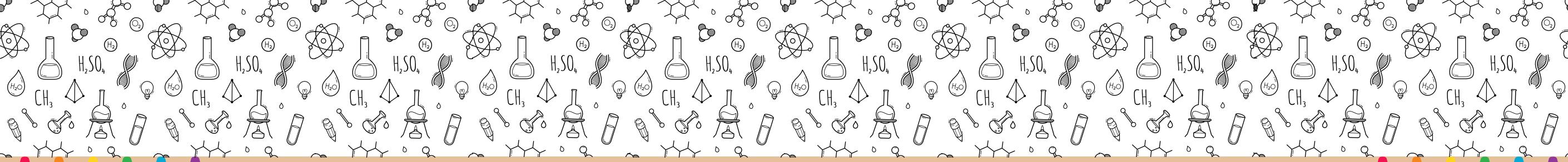
Coordinates your movements.



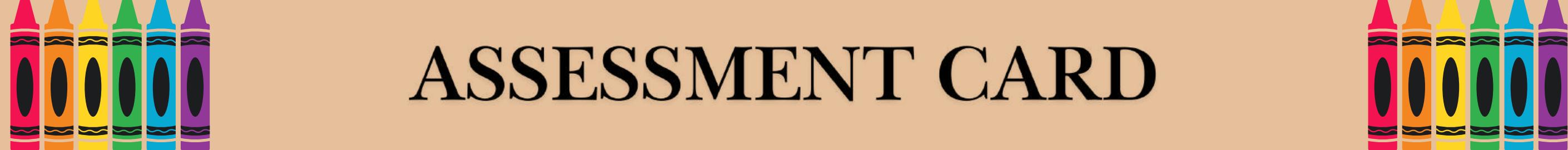
Connects the brain to the spinal cord and controls most basic activites for life (breathing, heartbeat, etc..)



B	C	E	R	E	B	R	U	M	M	B
R	R	E	R	U	R	V	I	V	E	R
A	O	A	S	C	A	E	R	X	N	A
I	C	E	B	E	L	U	M	E	M	I
N	I	N	E	S	I	N	E	M	O	N
S	T	E	M	A	N	I	C	E	O	N



# ASSESSMENT CARD



**A. Direction:** Read each statement carefully. Choose the letter of the correct answer and write it on your answer sheet.

1. The four lobes of the brain are:
  - a. polemic, orbital , occipital, and frontal
  - b. frontal, parietal, temporal and occipital
  - c. parietal, medial, frontal and lateral
  - d. dorsal, ventral, superior, and inferior
  
2. What lobe is responsible for vision?
  - a. frontal lobe
  - b. temporal lobe
  - c. occipital lobe
  - d. parietal
  
3. It is a brain lobe that is responsible for the cognitive functions
  - a. frontal lobe
  - b. temporal lobe
  - c. occipital lobe
  - d. parietal
  
4. Which part of brain that has a function to coordinate muscle movements, maintain posture, and balance?
  - a. cerebrum
  - b. cerebellum
  - c. brainstem
  - d. spinal cord
  
5. Which area of the brain is not part of the cerebral cortex?
  - a. frontal lobe
  - b. parietal lobe
  - c. cerebellum
  - d. temporal lobe

# ASSESSMENT CARD



**B. Direction:** Arrange the jumbled letters and give each function.

1. murberec

---

---

---

---

2. muleberec

---

---

---

---

3. metsniarb

---

---

---

---

# ASSESSMENT CARD



## FIND MY FUNCTION

**Direction:** Analyze the following sentence. Put a check on the sentences that tells a function of the brain.

1. It controls the voluntary activities of the body like thinking, solving problems, and memorizing details and decisions.
2. It controls the muscle movement of our body like walking and writing.
3. It coordinates muscular actions.
4. They absorb nutritive substances and eliminate the waste
5. It helps maintain a person's sense of balance.
6. It connects the brain to the spinal cord.
7. It pumps blood into the body
8. It controls the involuntary muscles of the body and coordinate functions like beating of the heart and breathing.
9. It is the organ that processes the food.
10. It is responsible for man's ability to learn habits and develop skills.

# ENRICHMENT CARD

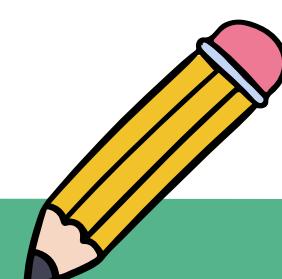


## FIND MY FUNCTION

*Direction:* Match the parts of the brain with its function.

1. It's in charge of the balance, the posture and coordination.
2. The largest part of the brain, composed of right and left hemispheres.
3. It performs involuntary actions such as breathing, blood pressure, heartbeat, many reflexes.
4. Some of its functions are; releasing hormones, regulating body temperature, controlling appetite.
5. Reading, interpreting colors and distance, recognizing faces are some of its functions.
6. It has a major role in learning and storing long-term memories.
7. Some of it's function are; hearing, speech, memory, and processing emotions.
8. It provide sensory information to the brain including touch, pain, temperature, and mathematical calculations.
9. Planning, problem solving, movement, decision making, learning, memory, impulse control are some of it's functions.
10. It carries out essential functions of your brain, like memory, thinking, learning, reasoning, problem-solving, emotions, consciousness, and sensory functions.

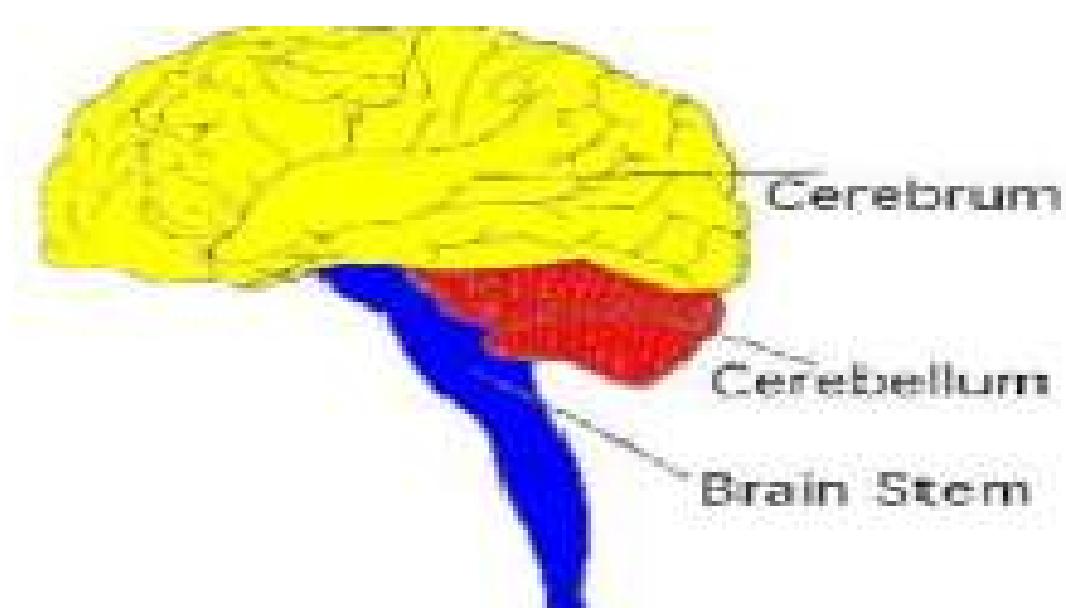
**Brainstem**  
**Hypothalamus**  
**Hippocampus**  
**Frontal lobes**  
**Occipital Lobe**  
**Temporal lobe**  
**Cerebrum**  
**Cerebellum**  
**Parietal lobes**  
**Cerebral cortex**



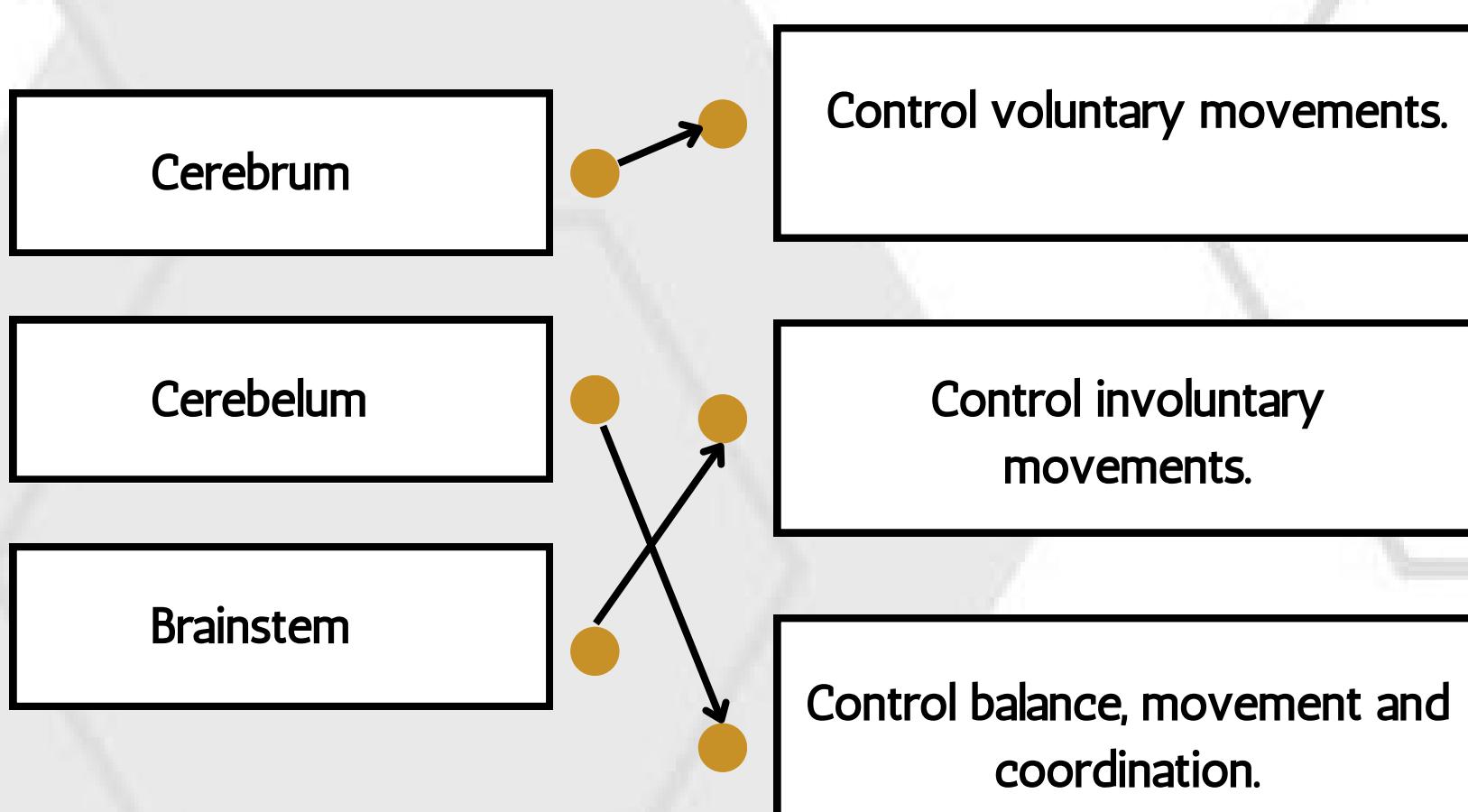
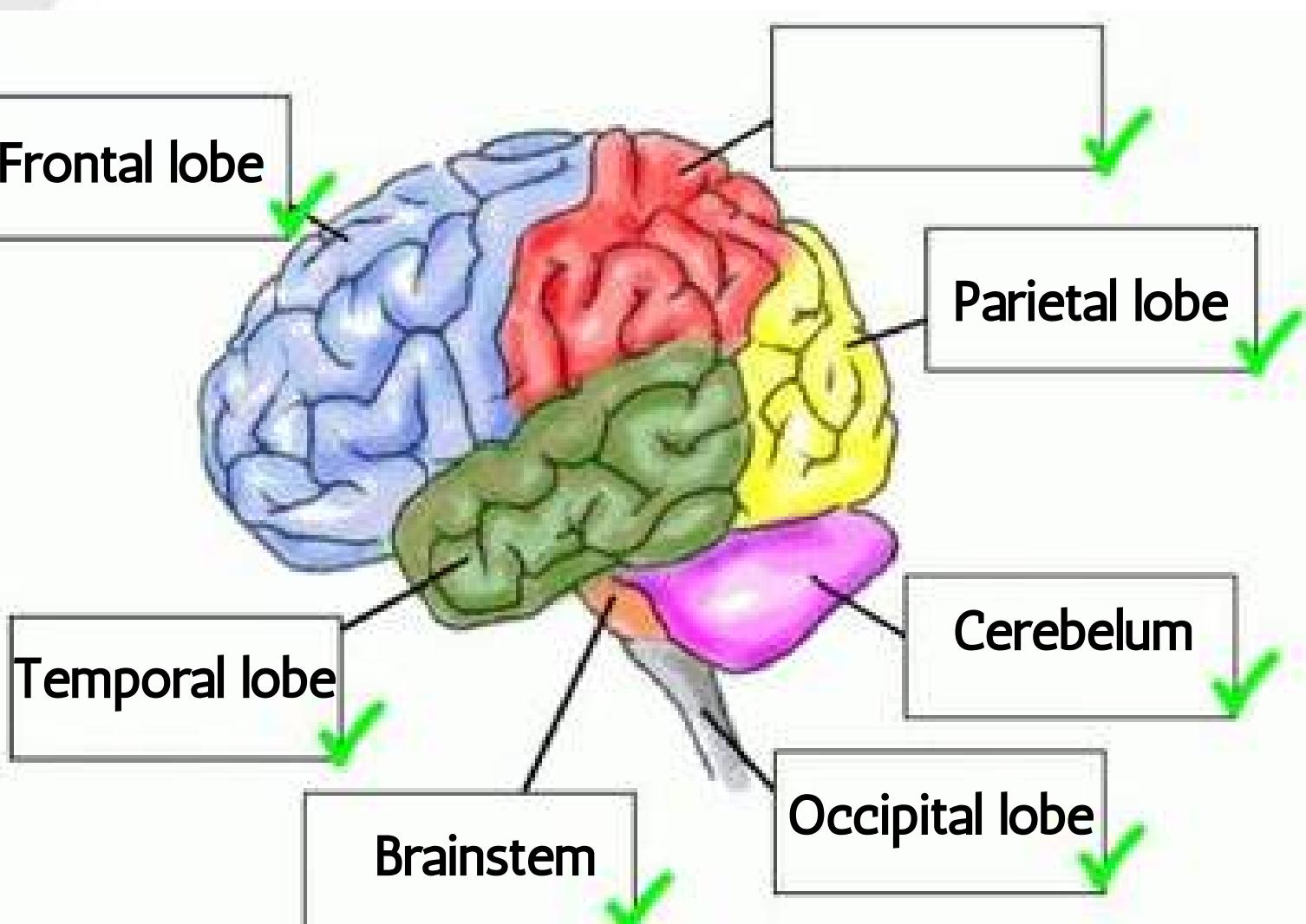


# ANSWER KEY CARD

## ACTIVITYN 1 MAKE ME COLOFRUL



## ACTIVITYN 2





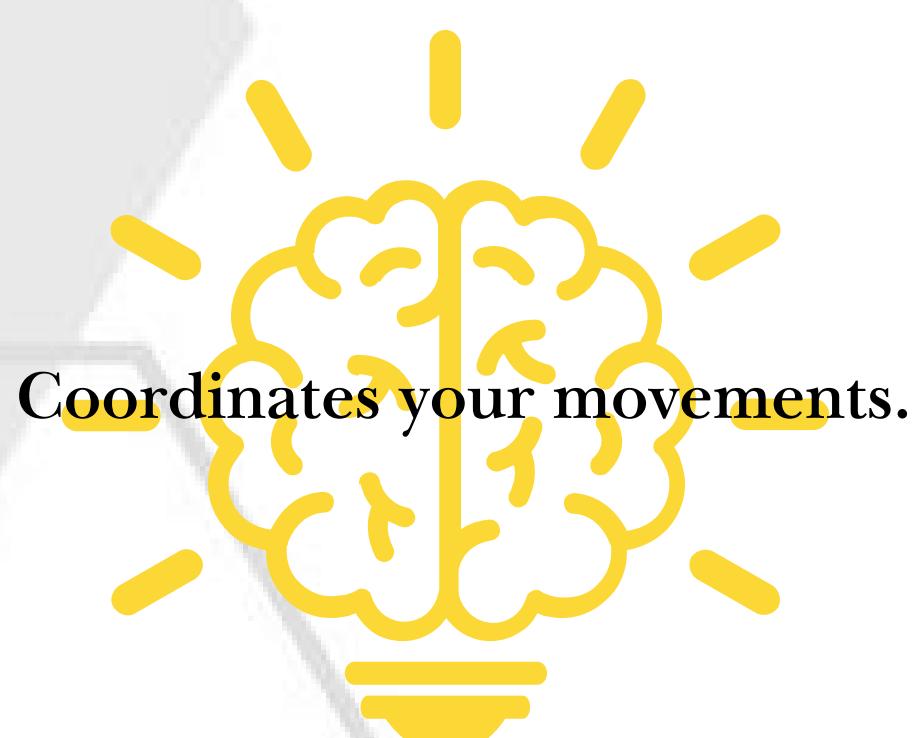
# ANSWER KEY CARD



## ACTIVITYN 3

Find Me....Just a Thought

Interprets signals from your body & forms responses, emotions, pains, hunger, etc.



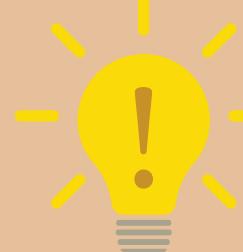
Connects the brain to the spinal cord and controls most basic activites for life (breathing, heartbeat, etc..)

answer

answer

B	C	E	R	E	B	R	U	M	M	B
R	R	E	R	U	R	V	I	V	E	R
A	O	A	S	C	A	E	R	X	N	A
I	C	E	B	E	L	U	M	E	M	I
N	I	N	E	S	I	N	E	M	O	N
S	T	E	M	A	N	I	C	E	O	N

answer



# ANSWER KEY CARD



A.

1. A
2. B
3. A
4. C
5. B



murberec= **CEREBRUM**

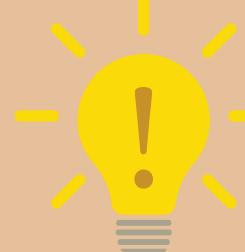
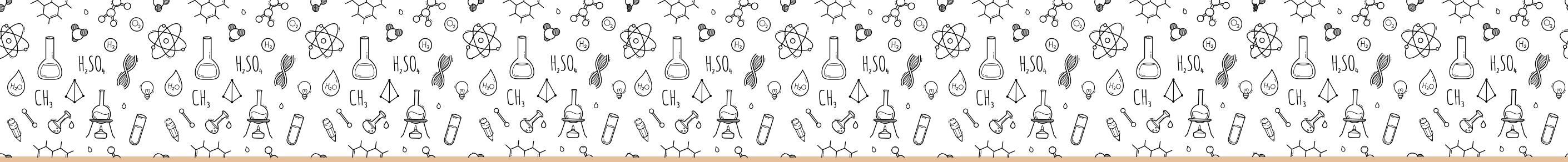
*Interprets signals from your body & forms responses  
(emotions, plan, hunger, etc.)*

**2. muleberec= CEREBELLUM**

*Connects the brain to the spinal cord and controls most basic activities for life  
(breathing, heartbeat, etc.)*

**3. metsniarb= BRAINSTEM**

*Coordinates your movement.*



# ANSWER KEY CARD



## FIND MY FUNCTION

**Direction:** Analyze the following sentence. Put a check on the sentences that tells a function of the brain.

- 1. It controls the voluntary activities of the body like thinking, solving problems, and memorizing details and decisions.
- 2. It controls the muscle movement of our body like walking and writing.
- 3. It coordinates muscular actions.
- 4. They absorb nutritive substances and eliminate the waste
- 5. It helps maintain a person's sense of balance.
- 6. It connects the brain to the spinal cord.
- 7. It pumps blood into the body
- 8. It controls the involuntary muscles of the body and coordinate functions like beating of the heart and breathing.
- 9. It is the organ that processes the food.
- 10. It is responsible for man's ability to learn habits and develop skills.



# ANSWER KEY CARD



## FIND MY FUNCTION

1. It's in charge of the balance, the posture and coordination.  
**answer: H**

2. The largest part of the brain, composed of right and left hemispheres.  
**answer: G**

3. It performs involuntary actions such as breathing, blood pressure, heartbeat, many reflexes.

**answer: A**

4. Some of its functions are; releasing hormones, regulating body temperature, controlling appetite.

**answer: B**

5. Reading, interpreting colors and distance, recognizing faces are some of its functions.

**answer: E**

6. It has a major role in learning and storing long-term memories.

**answer: C**

7. Some of it's function are; hearing, speech, memory, and processing emotions.

**answer: F**

8. It provide sensory information to the brain including touch, pain, temperature, and mathematical calculations.

**answer: I**

9. Planning, problem solving, movement, decision making, learning, memory, impulse control are some of it's functions.

**answer: D**

10. It carries out essential functions of your brain, like memory, thinking, learning, reasoning, problem-solving, emotions, consciousness, and sensory functions.

**answer: J**



# REFERENCE CARD

**Book:**

Science 4 Teachers Guide  
Science 4 Learner Material  
MELC s Science(S4LT-IIa-b-1)  
(Grade 4 Science Matatag Curriculum  
Human Brain: Facts, Functions &  
Anatomy - Live Science  
[www.livescience.com › Health](http://www.livescience.com/health)  
Read more at:

**Electronic:**

<http://www.ducksters.com/science/brain.php>  
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/anatomy-of-the-brain>  
<http://www.hopkinsmedicine.org/health/conditions-and-diseases/anatomy-of-the-brain>  
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/anatomy-of-the-brain>

# **ABOUT THE AUTHOR**



**Dr. Jennifer R. Campos** is a dedicated and accomplished educator with over 28 years of teaching experience. She graduated from Adelphi College, Lingayen, Pangasinan in 1994 with a Bachelor of Elementary Education. In pursuit of professional growth, she earned her Master of Arts in Education, major in Educational Management, from Araullo University, PHINMA Education Network, Cabanatuan City in 2012. She further advanced her academic credentials by completing her Doctor of Education at Lyceum-Northwestern University on December 22, 2022.

Currently, Dr. Campos serves as a Teacher III at Niñoy Elementary School, Aguilar District, Schools Division Office of Pangasinan 1, where she is known for her leadership, dedication to teaching, and commitment to lifelong learning.

Dr. Jennifer R. Campos exemplifies excellence in teaching, leadership, and community engagement. Her unwavering commitment to education, professional development, and advocacy for student success has earned her numerous accolades, making her a beacon of inspiration in the academic community.

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