

# Unit 2: Tissues

## Lesson 4: Brain

### Activity 1 (25'): Parts of the brain

Watch the first 10' of the following video <https://www.youtube.com/watch?v=kMKc8nfPATI>

Step 1 (5'): Label the following image

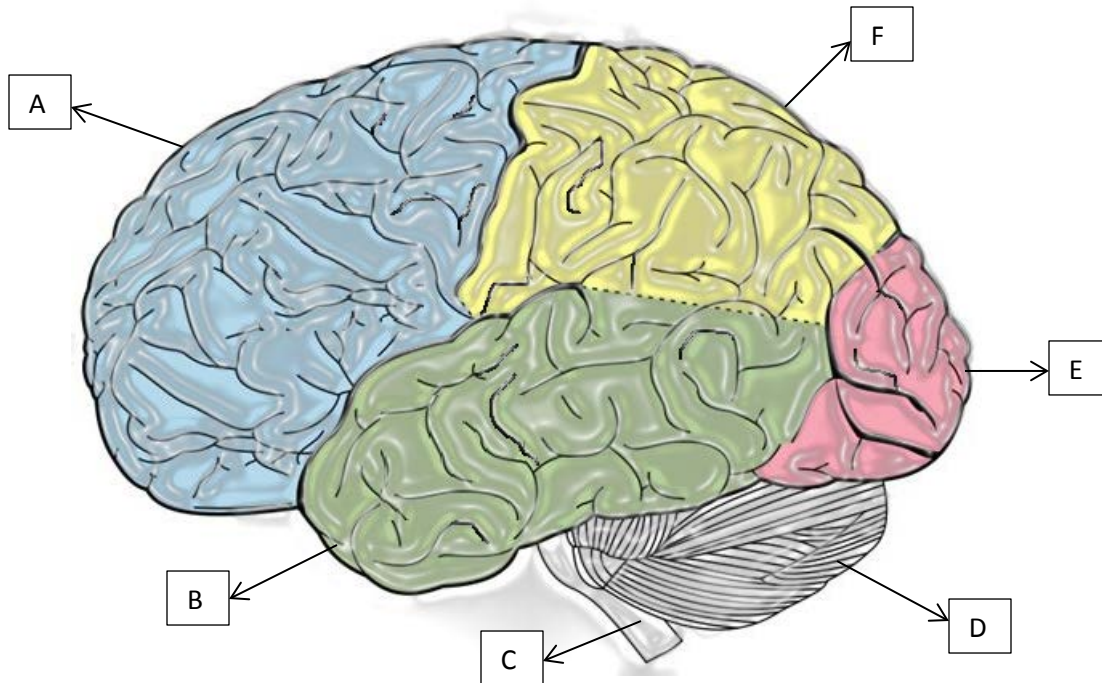


Image modified from "https://courses.lumenlearning.com/wmopen-psychology/chapter/outcome-parts-of-the-brain/"

Step 2 (10') In pairs, match each function with the correct part of the brain

Function	Lobe or cerebellum
Speech	
Hearing	
Vision	
Reading	
Smell	
Taste	
Concentration, problem solving	
Coordination	

## **Activity 1 (25'): Challenge yourself: if you were a doctor...**

Read the following simulations and answer the questions. At the end each group has to act as doctors discussing the Post- Operative Scenario

Adapted from <https://askbiologist.asu.edu/explore/nervous-journey>

### **Simulation 1**

Patient Description:

John smith is a 60-year-old male patient. He complained to his doctor about daily headaches. He also told him that sometimes he cannot see very well. Because of these symptoms, the doctor told him to see a neurologist. Two weeks later, the brain doctor ordered a magnetic resonance imaging (MRI) scan of the patient's brain. The MRI showed a brain tumor. John has an appointment today to have the tumor removed.

Post-Operative Scenario :

John is recovering in his hospital room. When he wakes up, he says that he is having a hard time hearing what people are saying. When his relatives come to see how he is doing, he seems confused. John does not seem to recognize the people in his room. A part of the patient's brain must have been hurt during the surgery.

Based on the patient's symptoms, what part of the brain do you think was hurt? What might have happened?

Answer:

### **Simulation 2**

Patient Description:

Francesca Dalloz is a 55-year-old female patient. According to her husband, the patient was at home when she began to have a seizure. The seizure lasted a minute and he immediately called for emergency medical service. Each one lasted about a minute. After the seizures stopped, the patient complained of a headache and sore muscles. The patient stated she had never had seizures in the past. At the hospital, she was seen by a neurologist. She had a computed tomography (CT) scan of her head. The CT scan showed a brain tumor.

Post-Operative Scenario:

Francesca is recovering in her hospital room. When the patient wakes up, she says she has a headache. Doctors tell her a headache is common after surgery. A few hours later, the patient is given food from the cafeteria. The nurse notices that the patient is having difficulty getting the food in her mouth. Multiple times she misses her mouth and gets food on her cheeks. After finally taking a few bites, she complains that the food is really bland and tasteless. The nurse immediately notifies you. Something may have gone wrong. A part of the patient's brain must have been hurt during the surgery.

Based on the patient's symptoms, what part of the brain do you think was hurt? What might have happened?

Answer:

### Simulation 3

#### Patient Description:

Mary Hugh is a 38-year-old female patient. She was seen in the emergency room after she fell at home. She said that walking has become harder recently. Her headaches have also been hurting more during the past few months. The doctor ordered a computed tomography (CT) scan because she hit her head when she fell. The CT scan showed a brain tumor.

#### Post-Operative Scenario

After Mary wakes up, she says that she has a dull headache but that it doesn't hurt too much. While she is recovering, she watches TV to pass the time. While watching her show, she begins to see two TVs. She is startled by the change in vision and calls for her nurse. When the nurse walks in, the patient sees two of nurses. The nurse immediately notifies doctors. Something may have gone wrong.

A part of the patient's brain must have been hurt during the surgery. What part of the brain do you think was hurt? ? What might have happened?

Answer:

### Simulation 4

#### Patient Description:

Manuel Gonzales is a 22-year-old male patient. He is currently in college and has been an excellent student. Recently however, the patient has been doing poorly on his tests, because he cannot remember what he learned. He says he has also had a lot of trouble concentrating. His doctor sent him to a neurologist, since he could not find anything wrong. After further evaluation, the patient had a computed tomography (CT) scan of his head. The CT scan showed a brain tumor.

#### Post-Operative Scenario

When Manuel wakes up, he says that he feels okay except for a mild headache. He gets up to go to the bathroom. After taking a few steps, he begins to fall. He grabs on to the rail of his bed before falling, he is having trouble walking. When doctor checks on him, he notices that his steps are very unsteady

What part of the brain do you think was hurt during the surgery? What might have happened?

Answer:

### Simulation 5

#### Patient Description:

Penelope Cruz is a 55-year-old female patient. She is usually very happy and cheerful. For the past month however, her husband noticed that she had been sad and stressed all the time. Although she denied any recent tragic events. Her husband also noticed that the Penelope seemed to be confused occasionally. Her

## Unit 2- Lesson 4: Brain

doctor was not able to find a cause for her depression, and a neurologist was called. After further evaluation, the patient had a computed tomography (CT) scan of her head. The CT scan showed a brain tumor.

### Post-Operative Scenario

Penelope is recovering in her hospital room. When she wakes up, she is happy to see that her family is in the room with her. She tries to sit up in bed but is unable to. She becomes worried and then tries to move her arms and fingers, but she is unable to. Her family immediately calls doctors. Something may have gone wrong. A part of the patient's brain must have been hurt during the surgery.

What part of the brain do you think was hurt? What might have happened?

Answer:

### Assessment

<b>Grade</b>	<b>Correct answer</b>	<b>Reasons why</b>
9	5/5	Complete well written
8	5/5	Incomplete and some mistakes (spelling, grammar and misspelt scientific terms)
7.5	4/5	Complete well written
7	4/5	Incomplete and some mistakes (spelling, grammar and misspelt scientific terms)
6.5	3/5	Complete well written
6	3/5	Incomplete and some mistakes (spelling, grammar and misspelt scientific terms)
5	2/5	Complete well written
4.5-4	2/5 or 1/5	Incomplete or complete but with mistakes (spelling, grammar and misspelt scientific terms)