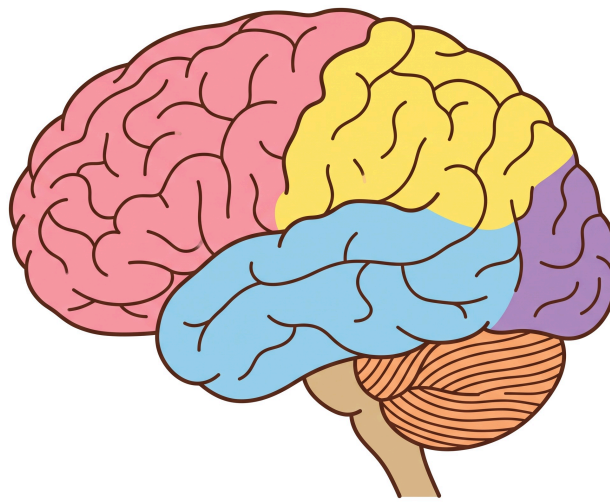
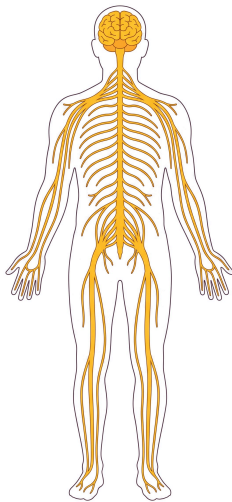


Nervous System and Brain

The brain, the spinal cord and the nerves



10

printable sheets

22

pages

All

answer keys included

Nervous System and Brain Teaching Pack

The brain, the spinal cord and the nerves

How to use this pack. The sheets are in a suggested teaching order: show the labeled diagrams, have students label the blank ones, then work through the practice sheets and finish with the quiz. Use them all over a week or pick the ones you need. The answer keys are together at the back.

What is inside

1. Teach

Nervous System Diagram	3
Parts of the Brain Diagram	4

2. Label

Blank Nervous System	5
Blank Parts of the Brain	6

3. Match

Nervous System Parts and Their Jobs	7
Parts of the Brain and Their Jobs	8

4. Read

Your Body's Control Network	9
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5. Order

The Path of a Reflex	11
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6. Review

Nervous System Crossword	12
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7. Check

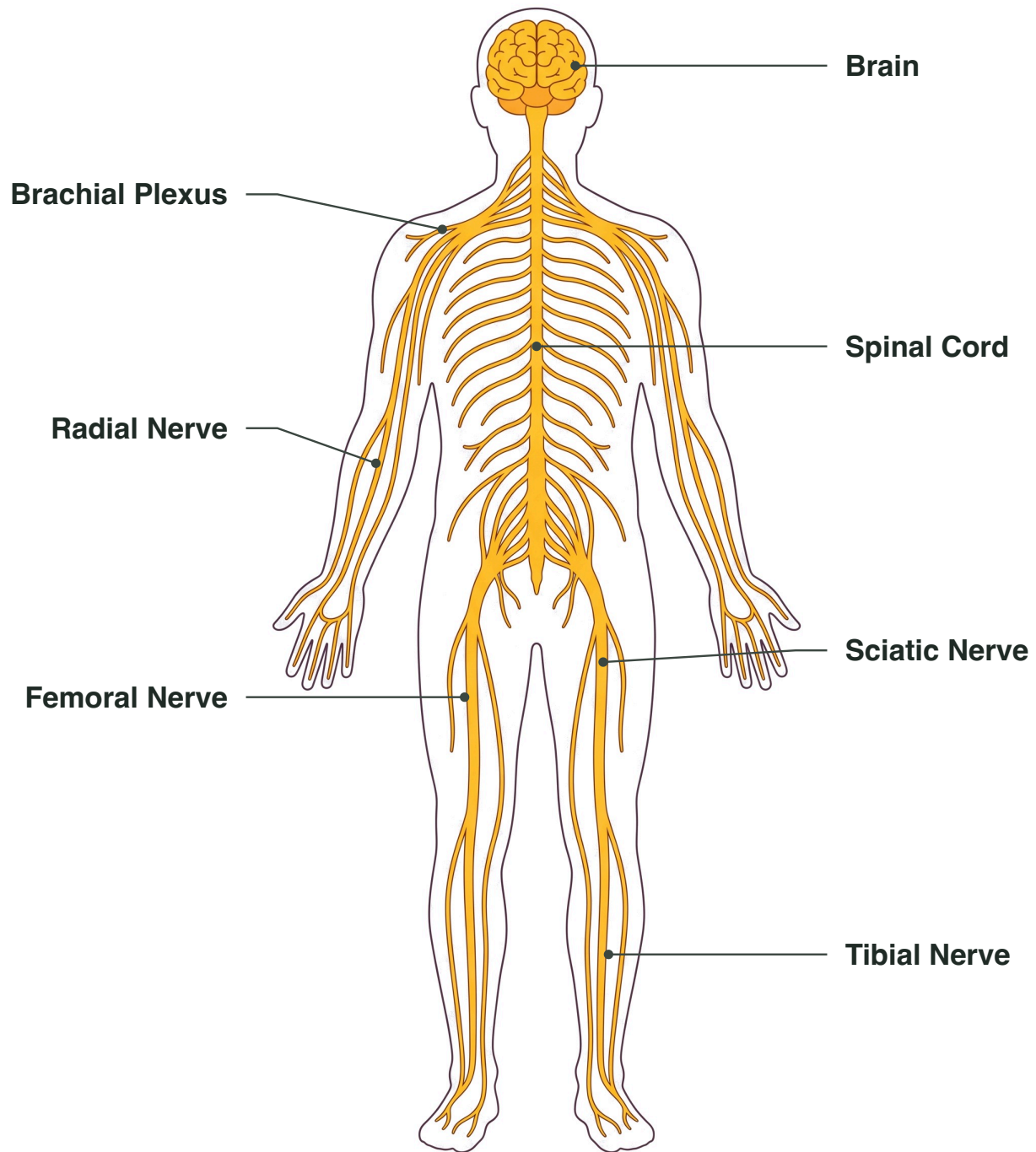
Nervous System and Brain Quiz	13
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Answer keys

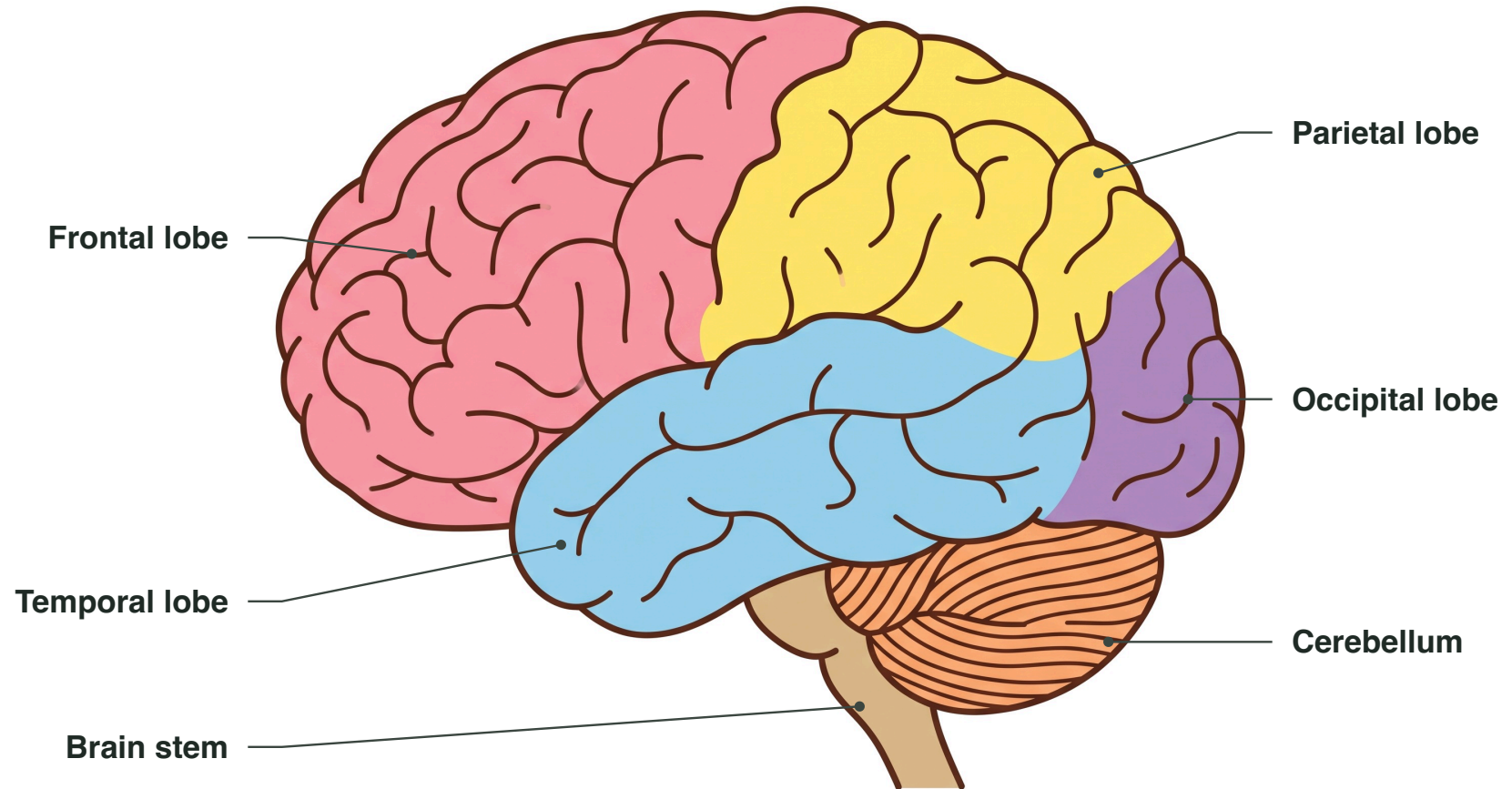
Every answer key, in the same order	15
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More free teaching packs. Skeletal System, Muscular System, Digestive System, Respiratory System, Heart and Circulation, Excretory System, Eye and Ear, Endocrine System, Immune System and more at printablescholar.com/teaching-packs/

The Nervous System



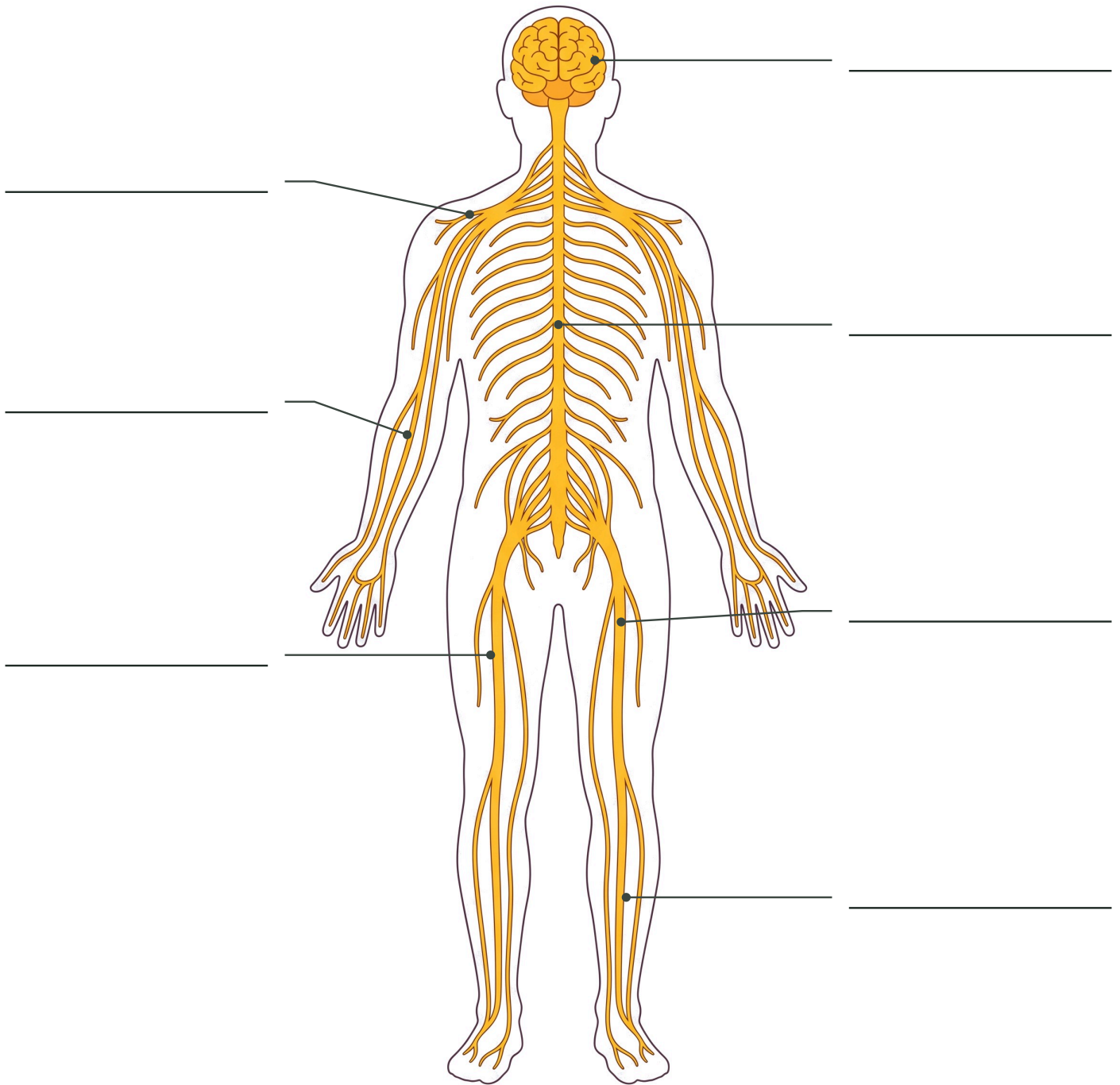
Parts of the Brain



The Nervous System

Name: _____

Write the name of each part on its line. Use the word bank.



Word bank

Brachial Plexus

Brain

Femoral Nerve

Radial Nerve

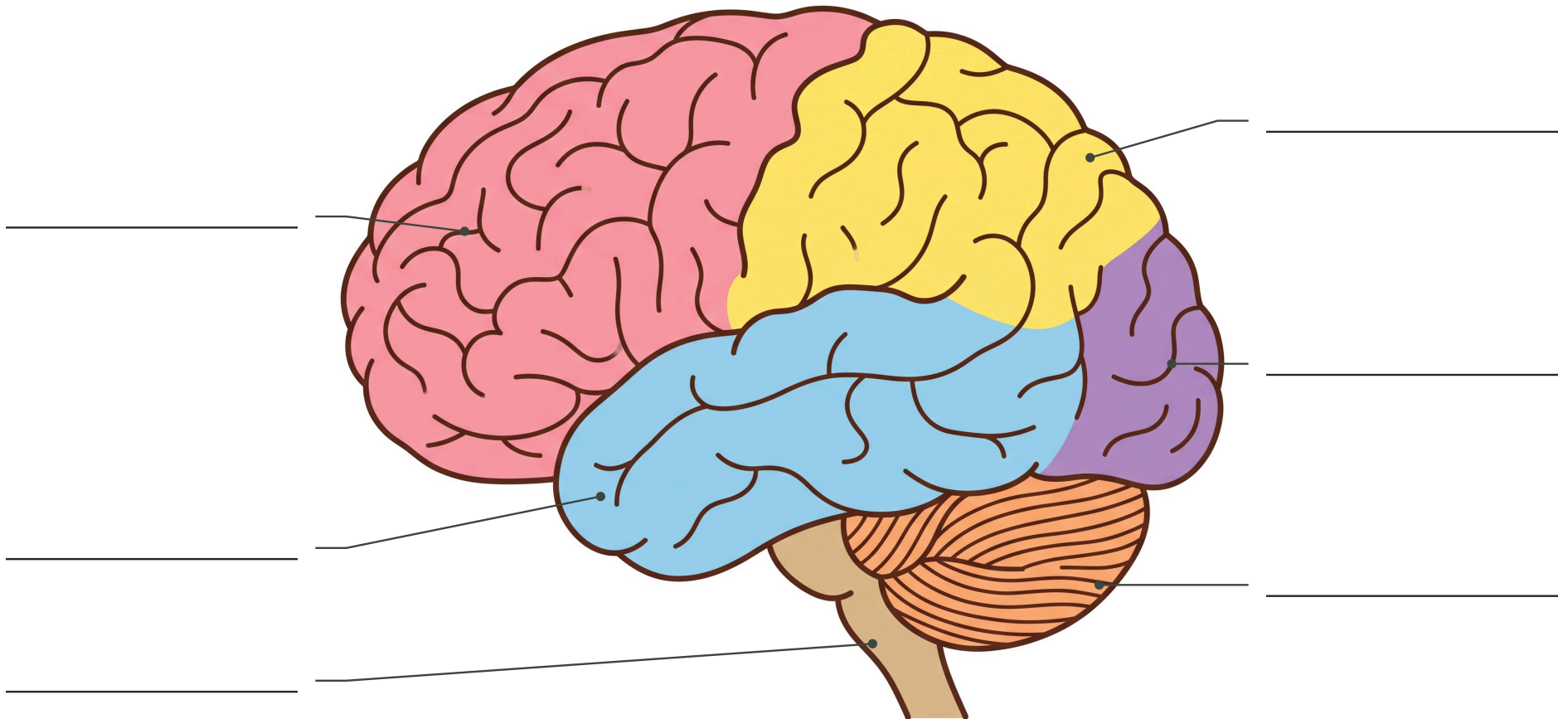
Sciatic Nerve

Spinal Cord Tibial Nerve

Parts of the Brain

Name: _____

Write the name of each part on its line. Use the word bank.



Word bank

Brain stem

Cerebellum

Frontal lobe

Occipital lobe

Parietal lobe

Temporal lobe

Nervous System Parts and Their Jobs

Use the labeled nervous system diagram to help you.

Part A. Write the part that does each job.

Word bank

Brachial Plexus

Brain

Femoral Nerve

Radial Nerve

Sciatic Nerve

Spinal Cord

Tibial Nerve

1. The thick bundle of nerves inside the backbone. It links the brain to the rest of the body.

2. It runs down the back of the lower leg and controls the calf muscles and the sole of the foot.

3. The control center of the nervous system. It receives, processes and sends signals.

4. It runs down the arm and controls the muscles that straighten the wrist and fingers.

5. The longest nerve in the body. It runs from the lower back through the hip and down the back of the leg.

6. A network of nerves at the shoulder that controls the arm and hand.

7. It controls the muscles at the front of the thigh that straighten the knee.

Part B. Answer the questions.

1. Which two parts on the diagram make up the central nervous system?

2. A doctor taps just below your kneecap. The muscles at the front of your thigh tighten and your knee straightens. Which nerve carried the signal to those muscles?

3. A bad injury to the spinal cord can stop a person from moving their legs, even though the leg muscles are healthy. Why?

Parts of the Brain and Their Jobs

Use the labeled brain diagram to help you.

Part A. Write the part that does each job.

Word bank

Brain stem

Cerebellum

Frontal lobe

Occipital lobe

Parietal lobe

Temporal lobe

1. It controls balance, coordination and smooth movement. _____

It handles thinking, planning, decisions and the movements you choose

2. to make. _____

3. It processes what your eyes see. _____

It connects the brain to the spinal cord and controls automatic jobs like

4. breathing and heartbeat. _____

It handles hearing and understanding language, and it helps form

5. memories. _____

It processes touch and temperature and keeps track of where your

6. body is in space. _____

Part B. Answer the questions.

1. A gymnast walks along a narrow beam without falling. Which part of the brain controls her balance?

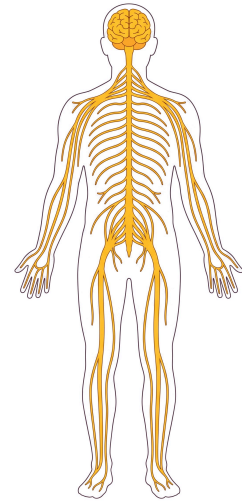
2. You are planning what to pack for a trip. Which lobe handles the planning?

3. Why is an injury to the brain stem so dangerous?

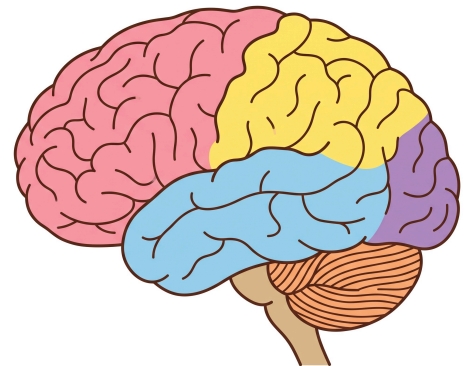
Your Body's Control Network

Read the text. Then answer the questions on the next page.

- 1 Right now your eyes are following these words, your lungs are filling with air and your heart is beating. One body system is in charge of all of it. The **nervous system** is the body's control and communication network. It gathers information, decides what to do and sends out orders.
- 2 The system has two main parts. The **central nervous system** is the brain and the **spinal cord**, a thick bundle of nerves inside your backbone. The **peripheral nervous system** is all the **nerves** that branch out from the brain and spinal cord to the rest of the body.
- 3 Nerves are bundles of long fibers from cells called **neurons**, which carry signals. **Sensory neurons** carry signals from your senses toward the spinal cord and brain. **Motor neurons** carry signals out to your muscles. Suppose a mosquito lands on your arm. Sensory neurons in your skin send a signal to the spinal cord, and the spinal cord passes it up to the brain. The brain decides to act and sends a signal back down. Motor neurons carry it to your arm muscles, and you swat.
- 4 The brain has parts with different jobs. The largest part is the **cerebrum**. It has four main lobes. The lobes work together, but each has its main jobs. The frontal lobe handles thinking and planning. The parietal lobe processes touch. The occipital lobe processes what your eyes see, and the temporal lobe handles hearing and helps form memories. The **cerebellum** controls balance and coordination. The **brain stem** connects the brain to the spinal cord and controls automatic jobs like breathing and heartbeat.
- 5 Some actions cannot wait for the brain. If you touch a hot pan, the signal reaches the spinal cord, and the spinal cord sends an order straight back to your arm muscles. Your hand jerks away before you even feel the pain. This quick, automatic response is called a **reflex**. Skipping the trip to the brain saves time, so you get less of a burn.



The brain, the spinal cord and the nerves.



The brain. Each part has its own job.

Your Body's Control Network: Questions

Go back to the text to find each answer. The paragraphs are numbered to help you.

1. What is this text mostly about?

- ☐ Why mosquito bites itch
- ☐ How to treat a burn
- ☐ How the nervous system is set up and how it controls the body
- ☐ How the heart and lungs work together

2. Which two parts make up the central nervous system?

- ☐ The cerebrum and the cerebellum
- ☐ The brain and the spinal cord
- ☐ The sensory neurons and the motor neurons
- ☐ The nerves and the muscles

3. What do motor neurons do?

4. Number the steps 1, 2 and 3 to show what happens when a mosquito lands on your arm (paragraph 3).

- ☐ The brain decides to act and sends a signal back down.
- ☐ Sensory neurons send a signal to the spinal cord, and it is passed up to the brain.
- ☐ Motor neurons carry the signal to your arm muscles, and you swat.

5. Which part of the brain controls breathing and heartbeat?

- ☐ The frontal lobe
- ☐ The cerebellum
- ☐ The temporal lobe
- ☐ The brain stem

6. Which lobe processes what your eyes see?

- ☐ The occipital lobe
- ☐ The parietal lobe
- ☐ The frontal lobe
- ☐ The temporal lobe

7. What is a reflex? Give the example from the text.

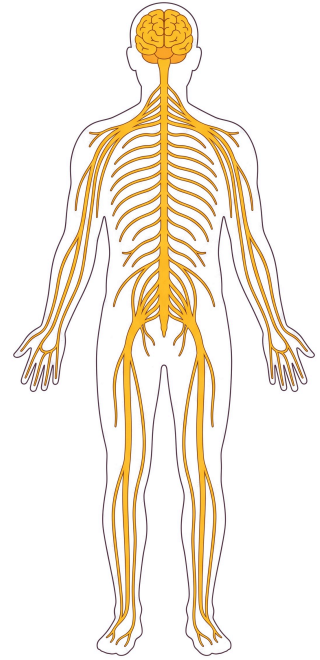
8. In a reflex, the order to move does not come from the brain. How does that help you?

The Path of a Reflex

You touch a hot pan and your hand jerks away. These steps tell what happens, but they are mixed up.

Part A. Number the steps from 1 to 7.

- ☐ Sensory neurons carry a signal up your arm to the spinal cord.
- ☐ Inside the spinal cord, the signal is passed on to motor neurons.
- ☐ Motor neurons carry the signal back out to the muscles of your arm.
- ☐ Your finger touches a hot pan.
- ☐ Your arm muscles tighten and pull your hand away from the pan.
- ☐ A moment later, the news reaches your brain and you feel the pain.
- ☐ Nerve endings in the skin of your finger sense the heat.



Part B. Answer the questions.

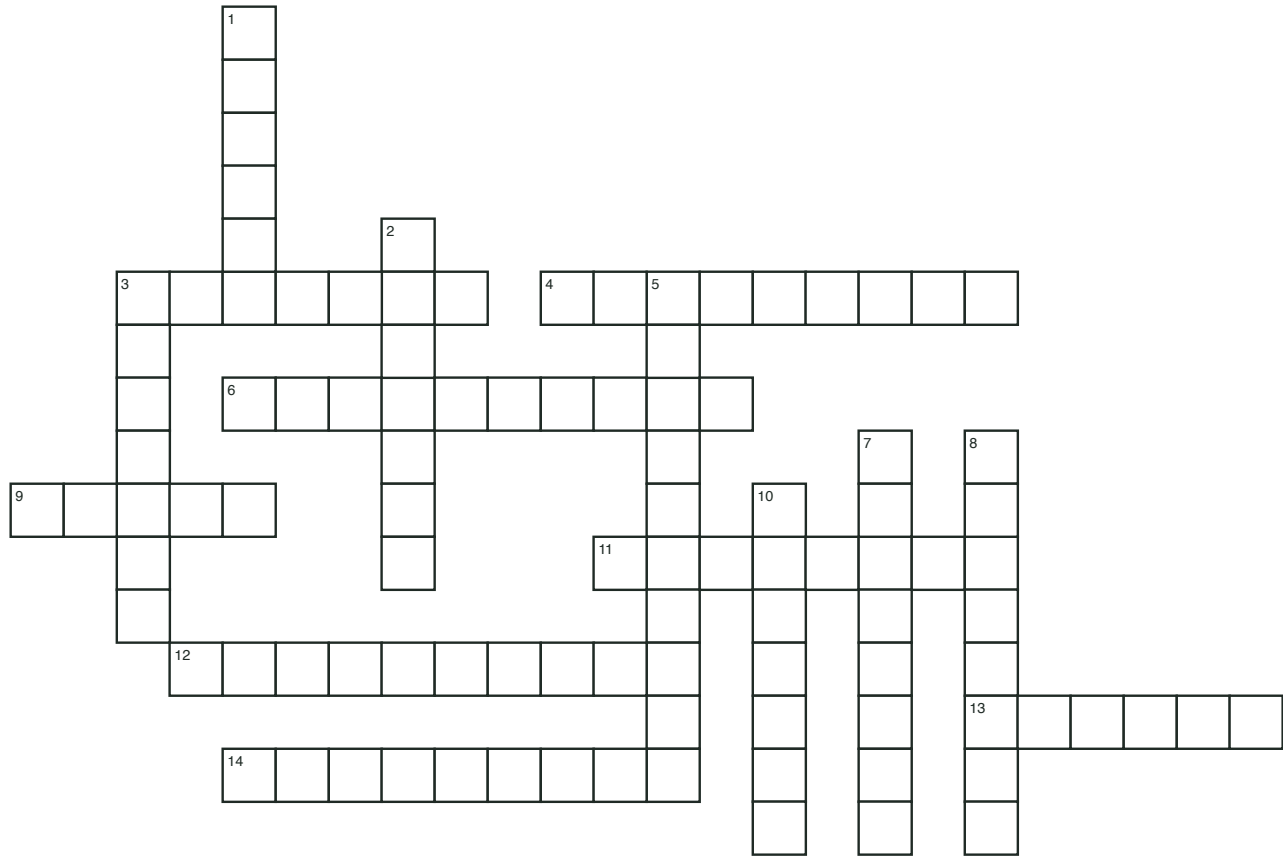
1. Which part of the central nervous system sends the order to pull your hand away?

2. What is the difference between a sensory neuron and a motor neuron?

3. Your hand moves before you feel the pain. Why is that useful?

Nervous System Crossword

Read each clue. Write the answer in the puzzle, one letter in each box. Use the word bank if you get stuck.



ACROSS

3. ____ neurons carry signals from your skin, eyes and ears toward the spinal cord and brain.
4. The ____ lobe processes what your eyes see.
6. The thick bundle of nerves inside the backbone (2 words).
9. ____ neurons carry signals out to your muscles.
11. The largest part of the brain. It has four main lobes.
12. The nerves that branch out to the rest of the body make up the ____ nervous system.
13. A quick, automatic response, like pulling your hand away from a hot pan.
14. It controls automatic jobs like breathing and heartbeat (2 words).

DOWN

1. A nerve cell. It carries signals.
2. The ____ lobe handles thinking, planning and decisions.
3. The ____ nerve is the longest nerve in the body.
5. The part of the brain that controls balance and coordination.
7. The ____ lobe processes touch and temperature.
8. The ____ lobe handles hearing and understanding language and helps form memories.
10. The brain and the spinal cord make up the ____ nervous system.

Word bank

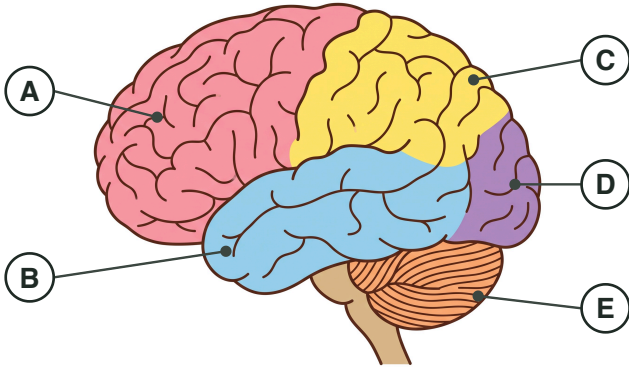
brain stem central cerebellum cerebrum frontal motor neuron occipital
parietal peripheral reflex sciatic sensory spinal cord temporal

Nervous System and Brain Quiz

Score _____ / 13

Show what you know about the nervous system and the brain.

Part A. This is the brain. Write the name of each part.



- A _____
B _____
C _____
D _____
E _____

Cerebellum · Frontal lobe · Occipital lobe · Parietal lobe ·
Temporal lobe

Part B. Choose the best answer.

- Which two parts make up the central nervous system?
☐ The brain and the heart
☐ The brain and the spinal cord
☐ The spinal cord and the muscles
☐ The nerves and the skin
- What is a neuron?
☐ A lobe of the brain
☐ A kind of muscle
☐ A cell that carries signals
☐ A bone in the back
- Which part of the brain controls balance and coordination?
☐ Frontal lobe
☐ Brain stem
☐ Temporal lobe
☐ Cerebellum
- Where do motor neurons carry signals?
☐ To the muscles
☐ To the eyes
☐ To the skin
☐ To the bones
- Which part of the brain controls breathing and heartbeat?
☐ Brain stem
☐ Cerebellum
☐ Occipital lobe
☐ Parietal lobe
- Which lobe handles thinking, planning and decisions?
☐ Occipital lobe
☐ Temporal lobe
☐ Frontal lobe
☐ Parietal lobe

Part C. Write your answer.

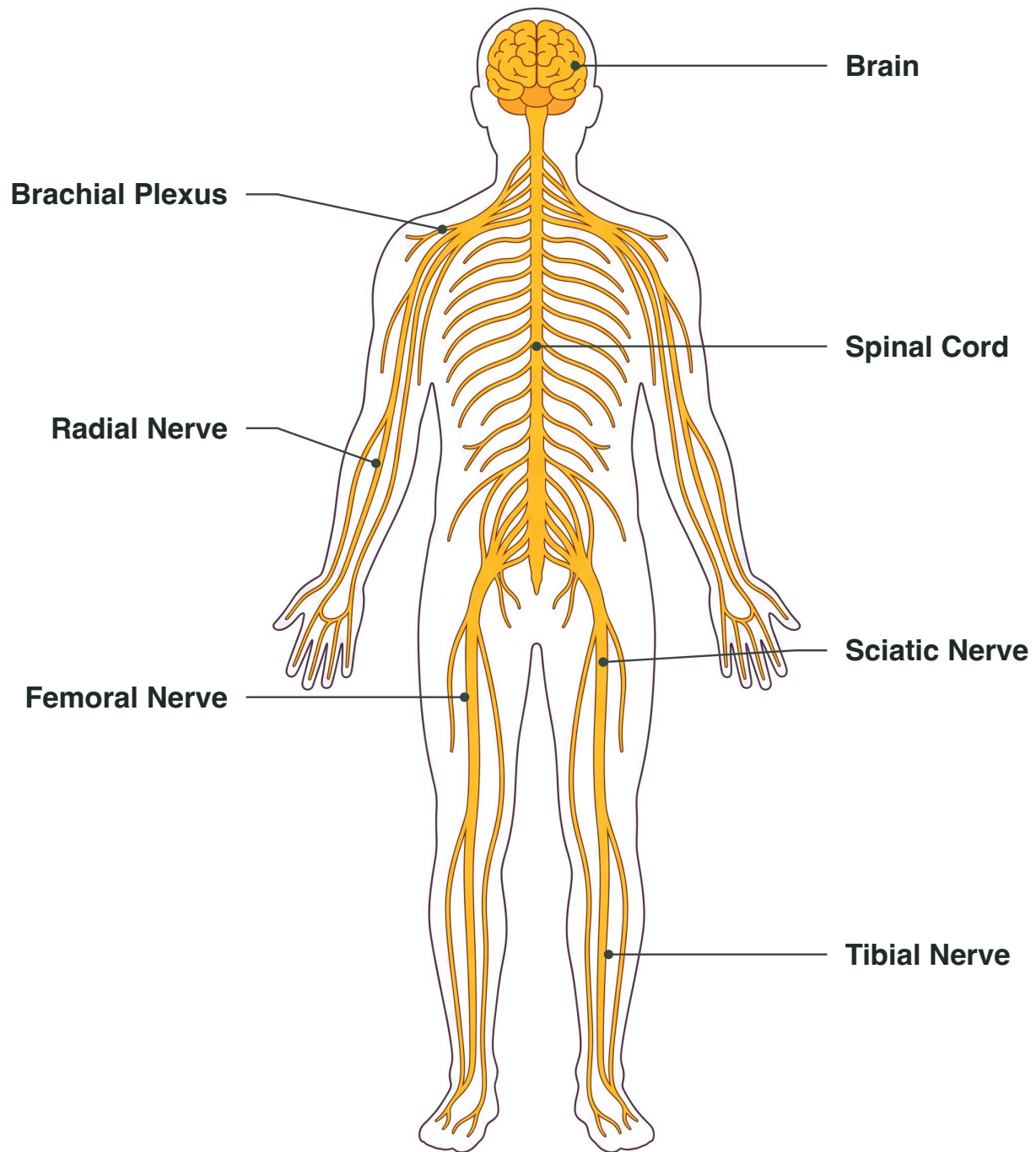
7. What is a reflex? Give one example.

8. What does the spinal cord do?

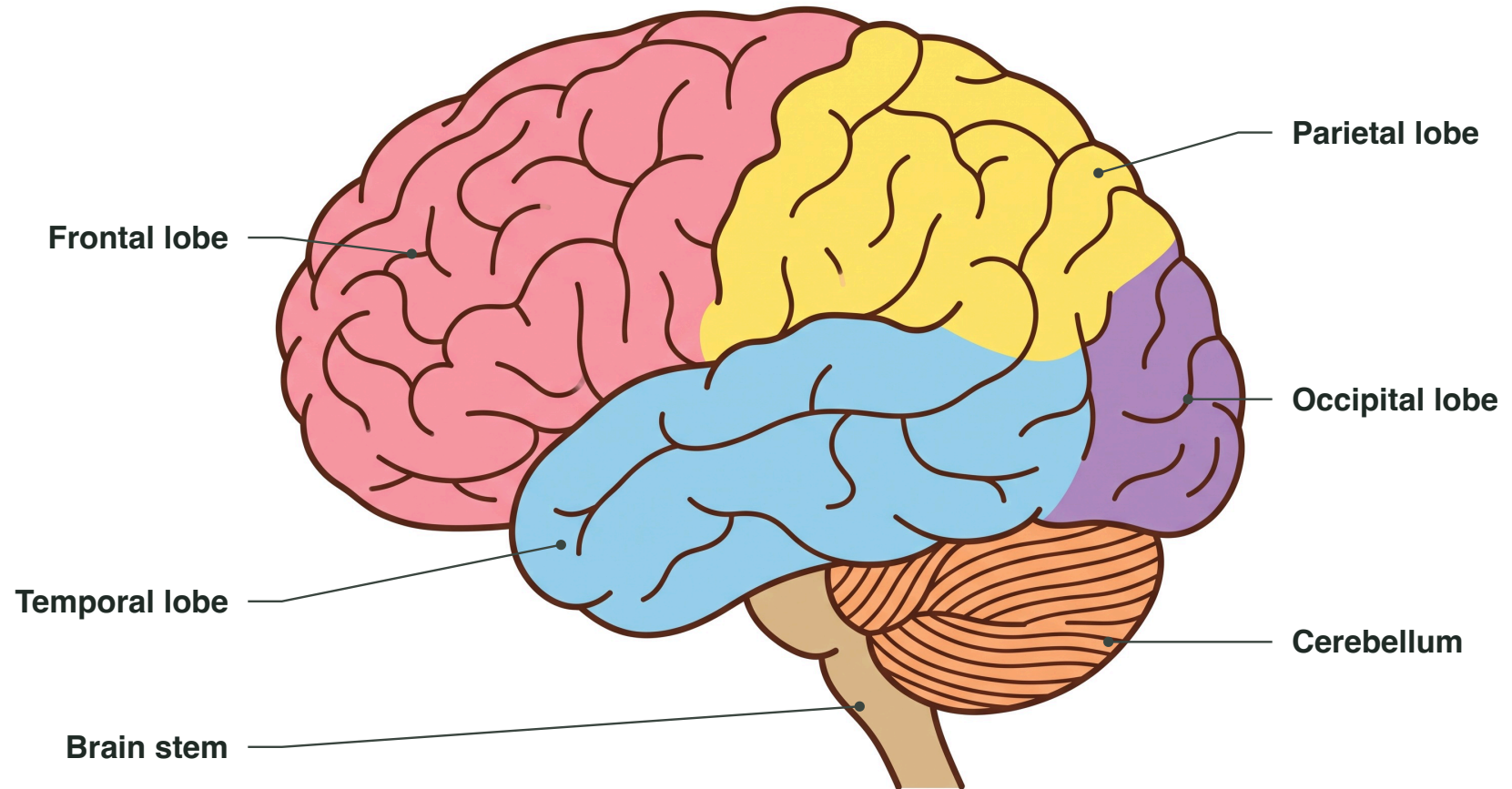
Answer Keys

In the same order as the sheets.

The Nervous System: Answer Key



Parts of the Brain: Answer Key



Nervous System Parts and Their Jobs: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank

Brachial Plexus

Brain

Femoral Nerve

Radial Nerve

Sciatic Nerve

Spinal Cord

Tibial Nerve

1. The thick bundle of nerves inside the backbone. It links the brain to the rest of the body.

Spinal Cord

2. It runs down the back of the lower leg and controls the calf muscles and the sole of the foot.

Tibial Nerve

3. The control center of the nervous system. It receives, processes and sends signals.

Brain

4. It runs down the arm and controls the muscles that straighten the wrist and fingers.

Radial Nerve

5. The longest nerve in the body. It runs from the lower back through the hip and down the back of the leg.

Sciatic Nerve

6. A network of nerves at the shoulder that controls the arm and hand.

Brachial Plexus

7. It controls the muscles at the front of the thigh that straighten the knee.

Femoral Nerve

Part B. Answer the questions.

1. Which two parts on the diagram make up the central nervous system?

The brain and the spinal cord.

2. A doctor taps just below your kneecap. The muscles at the front of your thigh tighten and your knee straightens. Which nerve carried the signal to those muscles?

The femoral nerve.

3. A bad injury to the spinal cord can stop a person from moving their legs, even though the leg muscles are healthy. Why?

Signals from the brain cannot get past the injury, so they never reach the nerves and muscles of the legs.

Parts of the Brain and Their Jobs: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank

Brain stem

Cerebellum

Frontal lobe

Occipital lobe

Parietal lobe

Temporal lobe

1. It controls balance, coordination and smooth movement.

Cerebellum

2. It handles thinking, planning, decisions and the movements you choose to make.

Frontal lobe

3. It processes what your eyes see.

Occipital lobe

4. It connects the brain to the spinal cord and controls automatic jobs like breathing and heartbeat.

Brain stem

5. It handles hearing and understanding language, and it helps form memories.

Temporal lobe

6. It processes touch and temperature and keeps track of where your body is in space.

Parietal lobe

Part B. Answer the questions.

1. A gymnast walks along a narrow beam without falling. Which part of the brain controls her balance?

The cerebellum.

2. You are planning what to pack for a trip. Which lobe handles the planning?

The frontal lobe.

3. Why is an injury to the brain stem so dangerous?

The brain stem controls breathing and heartbeat. A person cannot live without them.

Your Body's Control Network: Answer Key

Answers are in green. Written answers will vary; these are examples.

1. What is this text mostly about?

- ☐ Why mosquito bites itch
- ☐ How to treat a burn
- ☒ **How the nervous system is set up and how it controls the body**
- ☐ How the heart and lungs work together

2. Which two parts make up the central nervous system?

- ☐ The cerebrum and the cerebellum
- ☒ **The brain and the spinal cord**
- ☐ The sensory neurons and the motor neurons
- ☐ The nerves and the muscles

3. What do motor neurons do?

They carry signals out to the muscles.

4. Number the steps 1, 2 and 3 to show what happens when a mosquito lands on your arm (paragraph 3).

- 2** The brain decides to act and sends a signal back down.
- 1** Sensory neurons send a signal to the spinal cord, and it is passed up to the brain.
- 3** Motor neurons carry the signal to your arm muscles, and you swat.

5. Which part of the brain controls breathing and heartbeat?

- ☐ The frontal lobe
- ☐ The cerebellum
- ☐ The temporal lobe
- ☒ **The brain stem**

6. Which lobe processes what your eyes see?

- ☒ **The occipital lobe**
- ☐ The parietal lobe
- ☐ The frontal lobe
- ☐ The temporal lobe

7. What is a reflex? Give the example from the text.

A quick, automatic response. Example: your hand jerks away from a hot pan before you feel the pain.

8. In a reflex, the order to move does not come from the brain. How does that help you?

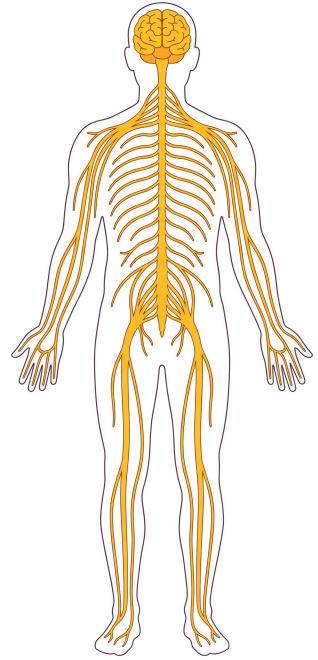
It saves time, so you get less of a burn.

The Path of a Reflex: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Number the steps from 1 to 7.

- 3** Sensory neurons carry a signal up your arm to the spinal cord.
- 4** Inside the spinal cord, the signal is passed on to motor neurons.
- 5** Motor neurons carry the signal back out to the muscles of your arm.
- 1** Your finger touches a hot pan.
- 6** Your arm muscles tighten and pull your hand away from the pan.
- 7** A moment later, the news reaches your brain and you feel the pain.
- 2** Nerve endings in the skin of your finger sense the heat.



Part B. Answer the questions.

1. Which part of the central nervous system sends the order to pull your hand away?

The spinal cord.

2. What is the difference between a sensory neuron and a motor neuron?

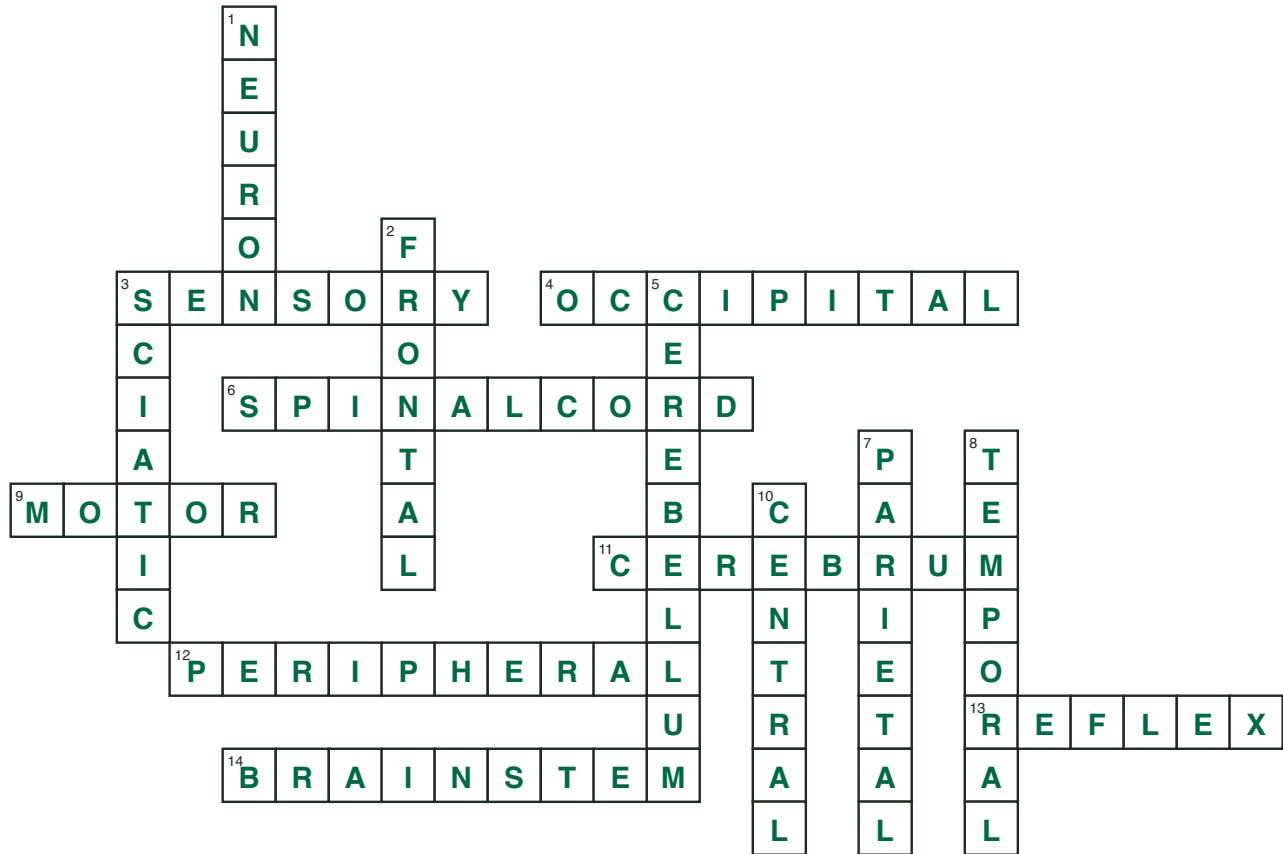
Sensory neurons carry signals from the senses toward the spinal cord and brain. Motor neurons carry signals out to the muscles.

3. Your hand moves before you feel the pain. Why is that useful?

Your hand gets away from the heat sooner, so you get less of a burn.

Nervous System Crossword: Answer Key

Answers are in green.



ACROSS

3. ____ neurons carry signals from your skin, eyes and ears toward the spinal cord and brain.
4. The ____ lobe processes what your eyes see.
6. The thick bundle of nerves inside the backbone (2 words).
9. ____ neurons carry signals out to your muscles.
11. The largest part of the brain. It has four main lobes.
12. The nerves that branch out to the rest of the body make up the ____ nervous system.
13. A quick, automatic response, like pulling your hand away from a hot pan.
14. It controls automatic jobs like breathing and heartbeat (2 words).

DOWN

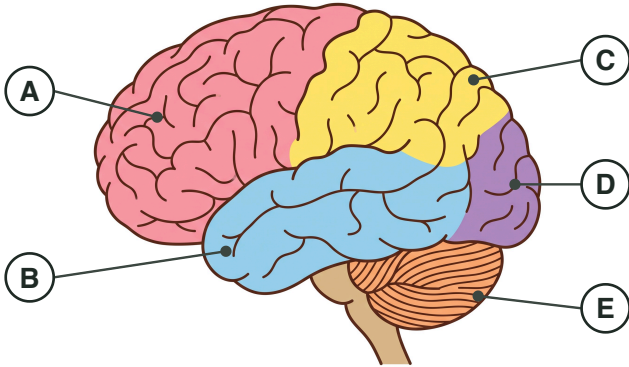
1. A nerve cell. It carries signals.
2. The ____ lobe handles thinking, planning and decisions.
3. The ____ nerve is the longest nerve in the body.
5. The part of the brain that controls balance and coordination.
7. The ____ lobe processes touch and temperature.
8. The ____ lobe handles hearing and understanding language and helps form memories.
10. The brain and the spinal cord make up the ____ nervous system.

Word bank brain stem central cerebellum cerebrum frontal motor neuron occipital
parietal peripheral reflex sciatic sensory spinal cord temporal

Nervous System and Brain Quiz: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. This is the brain. Write the name of each part.



A **Frontal lobe**

B **Temporal lobe**

C **Parietal lobe**

D **Occipital lobe**

E **Cerebellum**

Cerebellum · Frontal lobe · Occipital lobe · Parietal lobe · Temporal lobe

Part B. Choose the best answer.

1. Which two parts make up the central nervous system?

- ☐ The brain and the heart
- ☒ **The brain and the spinal cord**
- ☐ The spinal cord and the muscles
- ☐ The nerves and the skin

2. What is a neuron?

- ☐ A lobe of the brain
- ☐ A kind of muscle
- ☒ **A cell that carries signals**
- ☐ A bone in the back

3. Which part of the brain controls balance and coordination?

- ☐ Frontal lobe
- ☐ Brain stem
- ☐ Temporal lobe
- ☒ **Cerebellum**

4. Where do motor neurons carry signals?

- ☒ **To the muscles**
- ☐ To the eyes
- ☐ To the skin
- ☐ To the bones

5. Which part of the brain controls breathing and heartbeat?

- ☒ **Brain stem**
- ☐ Cerebellum
- ☐ Occipital lobe
- ☐ Parietal lobe

6. Which lobe handles thinking, planning and decisions?

- ☐ Occipital lobe
- ☐ Temporal lobe
- ☒ **Frontal lobe**
- ☐ Parietal lobe

Part C. Write your answer.

7. What is a reflex? Give one example.

A quick, automatic response. Example: pulling your hand away from something hot.

8. What does the spinal cord do?

It carries signals between the brain and the rest of the body.