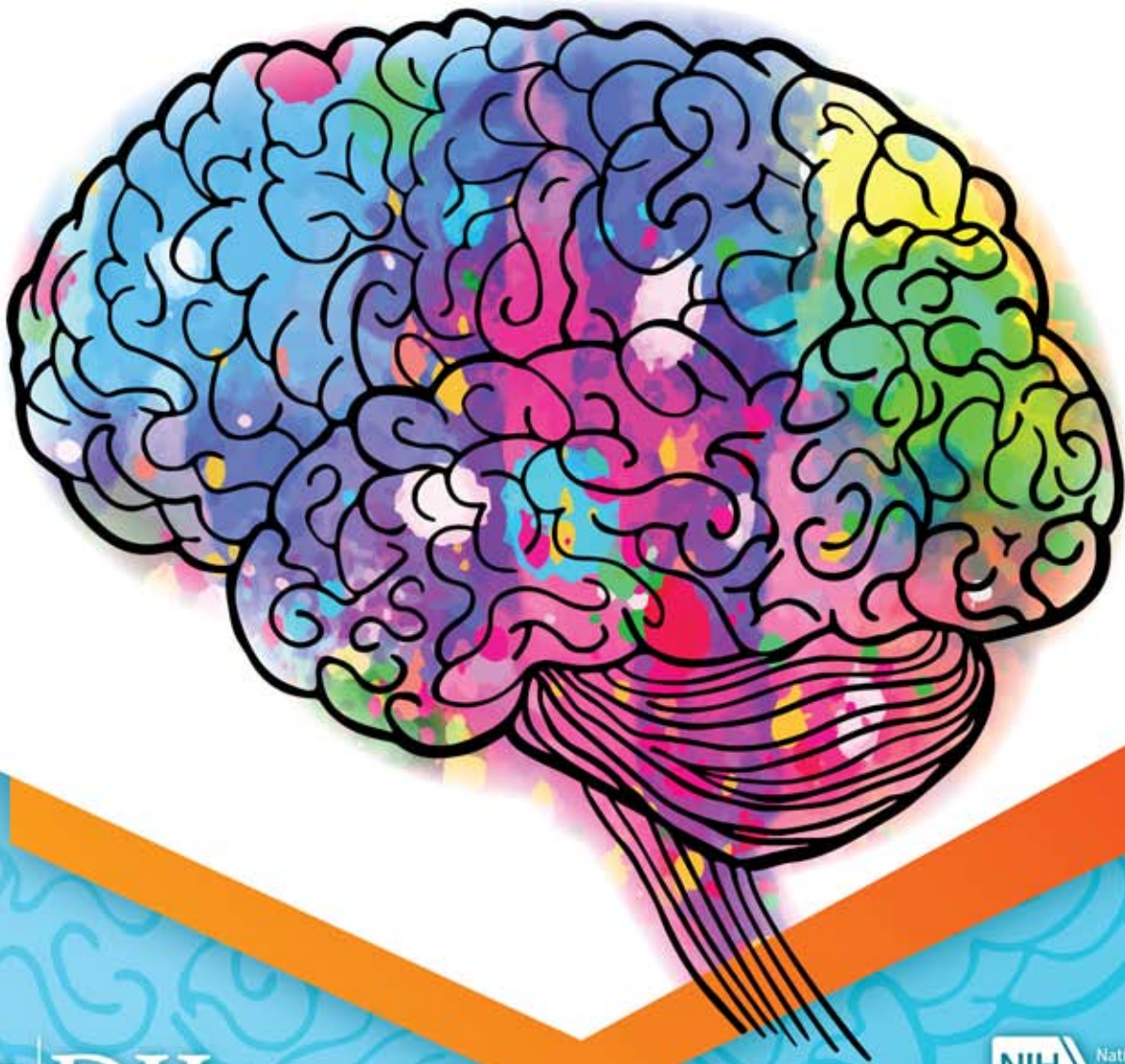


THE CREATIVE & HEALTHY BRAIN

COLORING & ACTIVITY BOOK

FOR GRADES 3RD-5TH
(AGES 8-11)



W | DII
DRUG INTERVENTION INSTITUTE

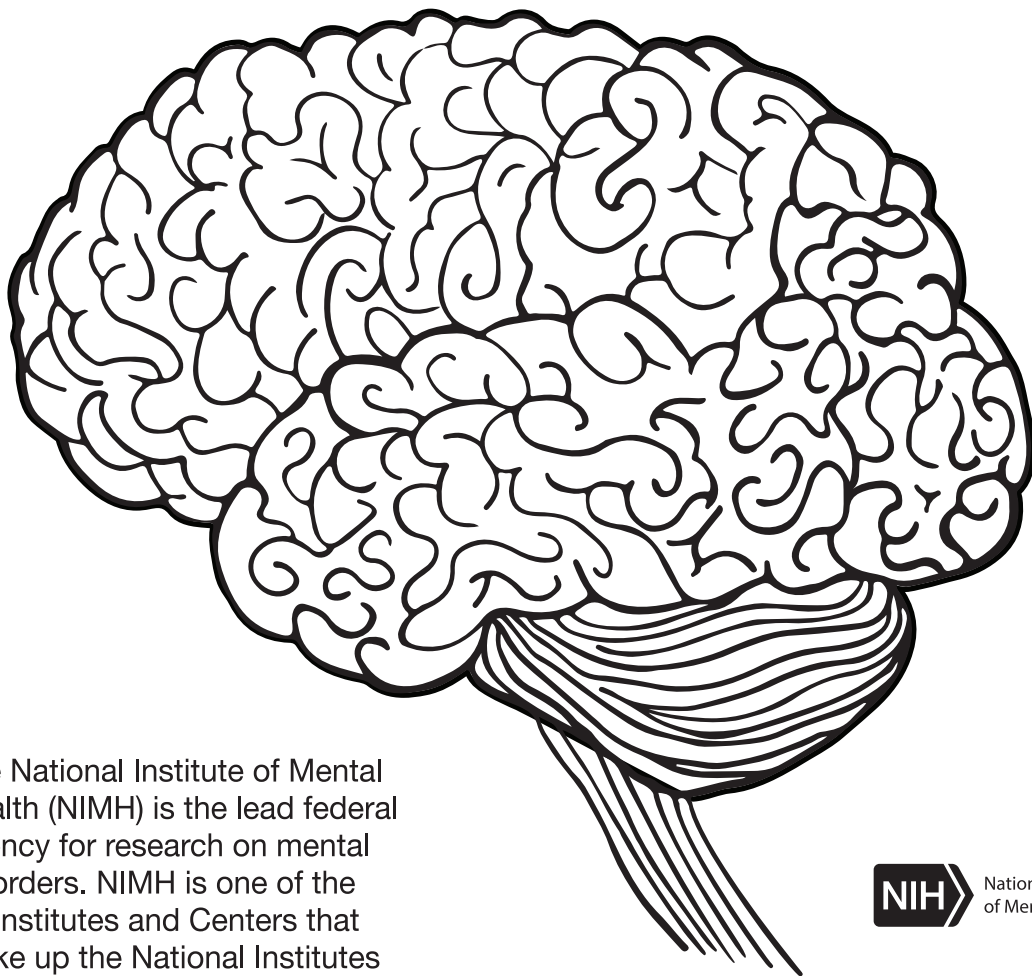
NIH National Institute
of Mental Health

Adapted from the
**NATIONAL INSTITUTE
of MENTAL HEALTH**

Adapted from the
NATIONAL INSTITUTE of MENTAL HEALTH

THE CREATIVE & HEALTHY BRAIN

COLORING & ACTIVITY BOOK



The National Institute of Mental Health (NIMH) is the lead federal agency for research on mental disorders. NIMH is one of the 27 Institutes and Centers that make up the National Institutes of Health (NIH), the nation's largest medical research agency. NIH is part of the U.S. Department of Health and Human Services.



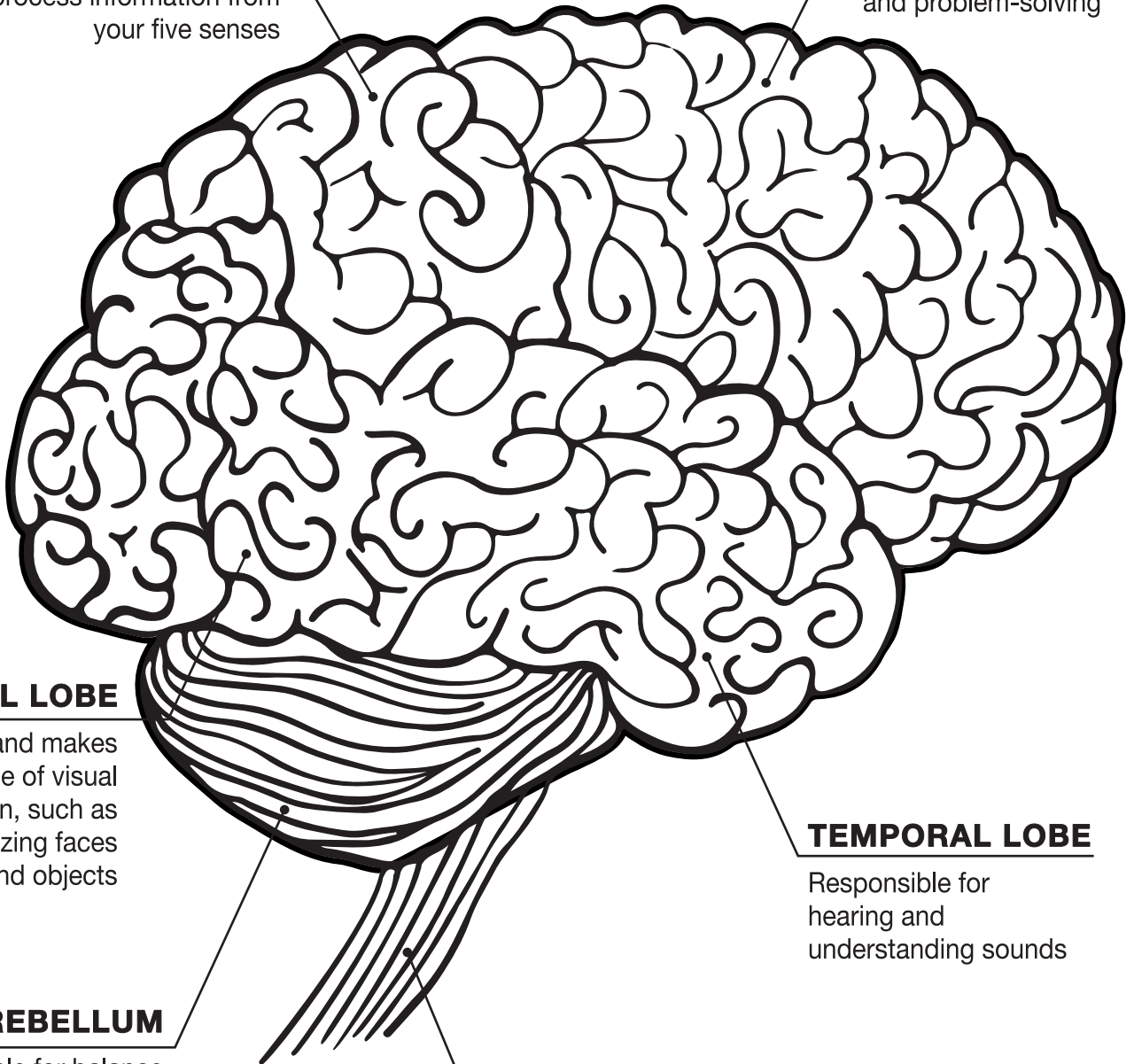
PARTS OF THE BRAIN

PARIETAL LOBE

Helps you understand language and process information from your five senses

FRONTAL LOBE

Aids in complex thinking, learning, and problem-solving



OCCIPITAL LOBE

Receives and makes sense of visual information, such as recognizing faces and objects

TEMPORAL LOBE

Responsible for hearing and understanding sounds

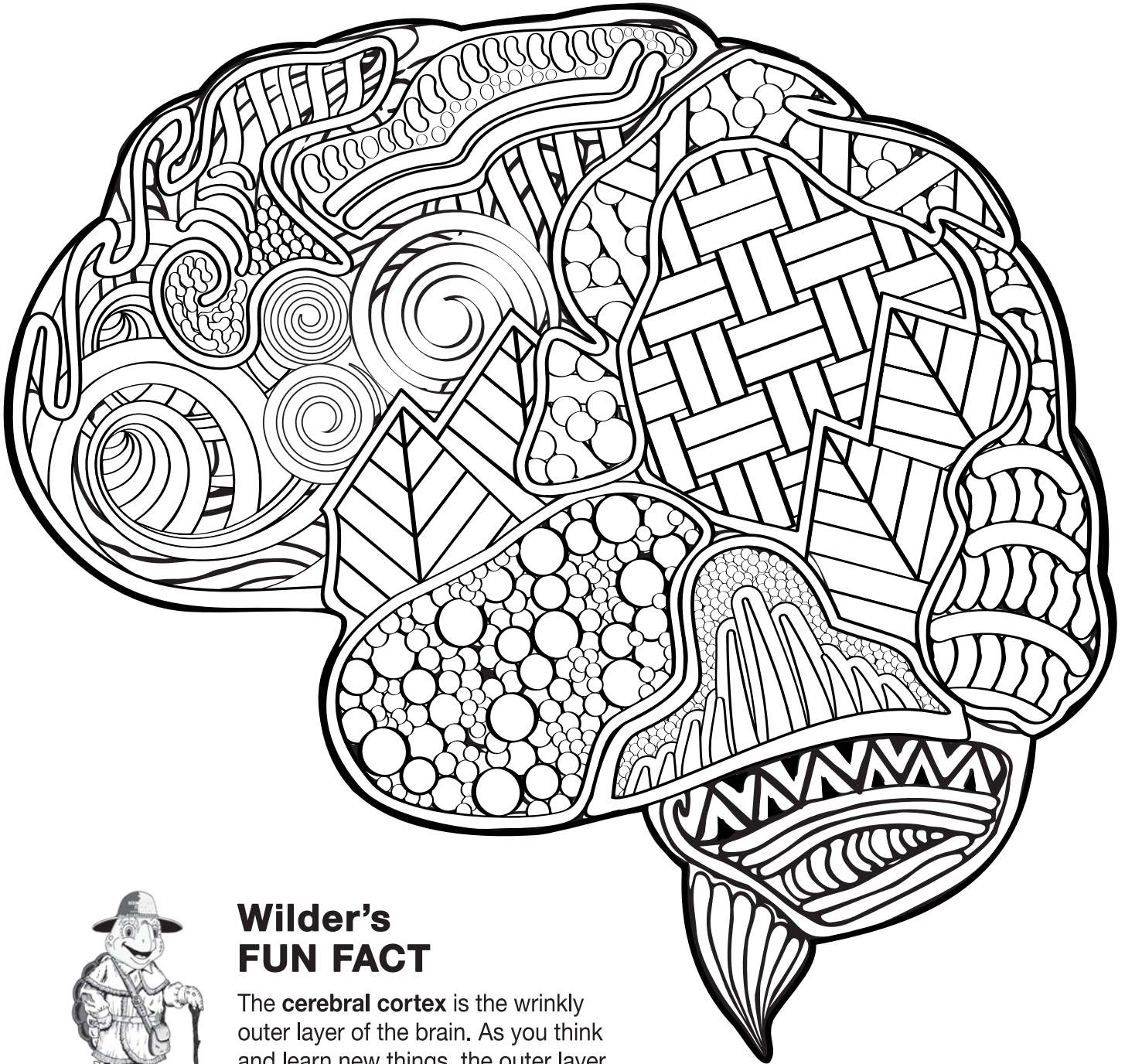
CEREBELLUM

Responsible for balance and coordination

BRAIN STEM

Controls your basic body functions, such as breathing, temperature, and heart rate

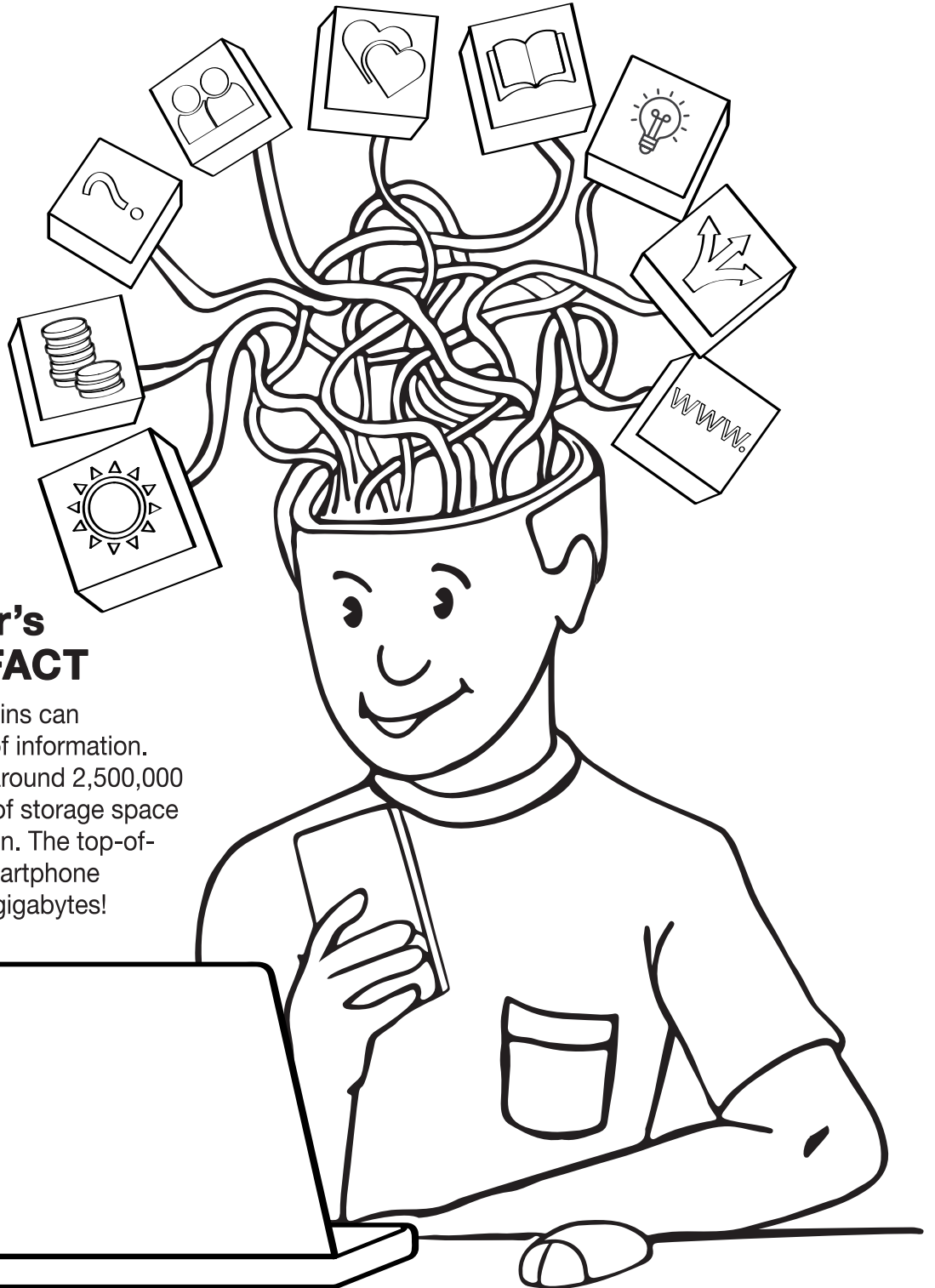
THE CEREBRAL CORTEX



Wilder's FUN FACT

The **cerebral cortex** is the wrinkly outer layer of the brain. As you think and learn new things, the outer layer folds up and gets wrinklier.

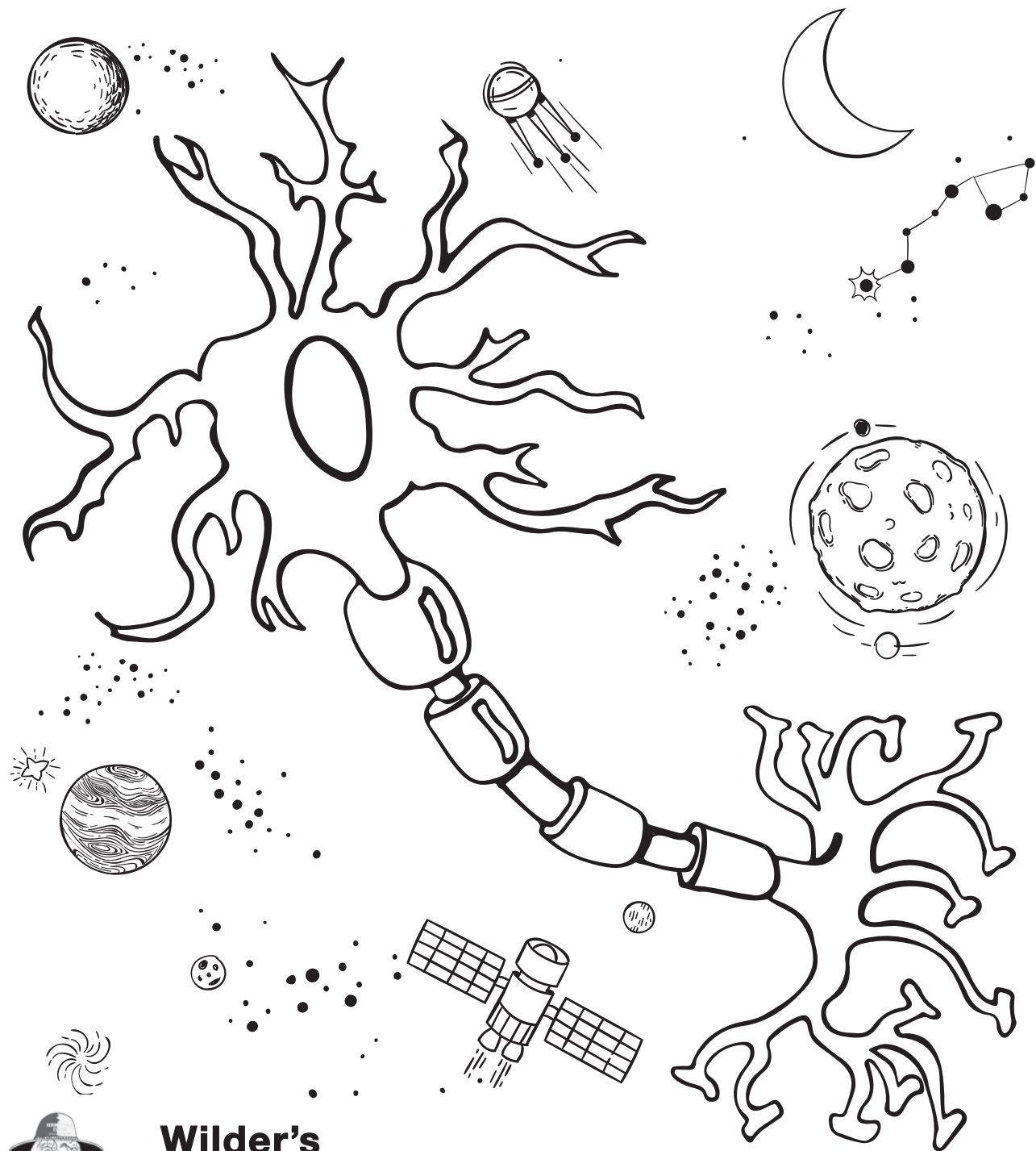
YOUR BRAIN AND MEMORY



Wilder's FUN FACT

Human brains can hold tons of information. There are around 2,500,000 gigabytes of storage space in your brain. The top-of-the-line smartphone has 1,000 gigabytes!

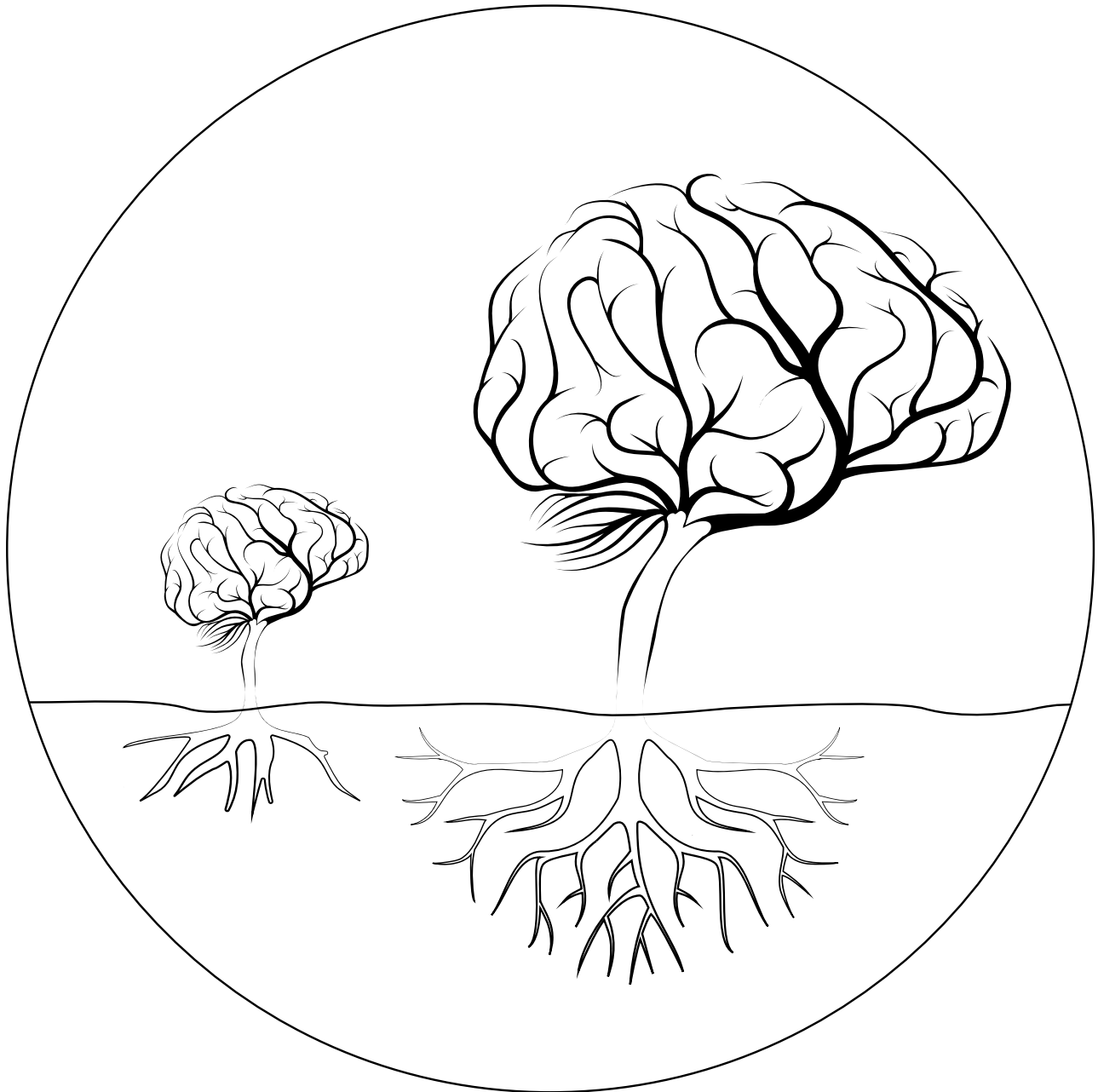
NEURONS IN THE BRAIN



Wilder's FUN FACT

Neurons are cells that send information in your brain. There are three main **types of neurons**: sensory **neurons**, motor **neurons**, and **interneurons**. All three have different roles and play an important part in communicating with the rest of the body. Your brain has about 100 billion neurons (that's 100,000,000,000!), which is about the same as the number of stars in the Milky Way galaxy.

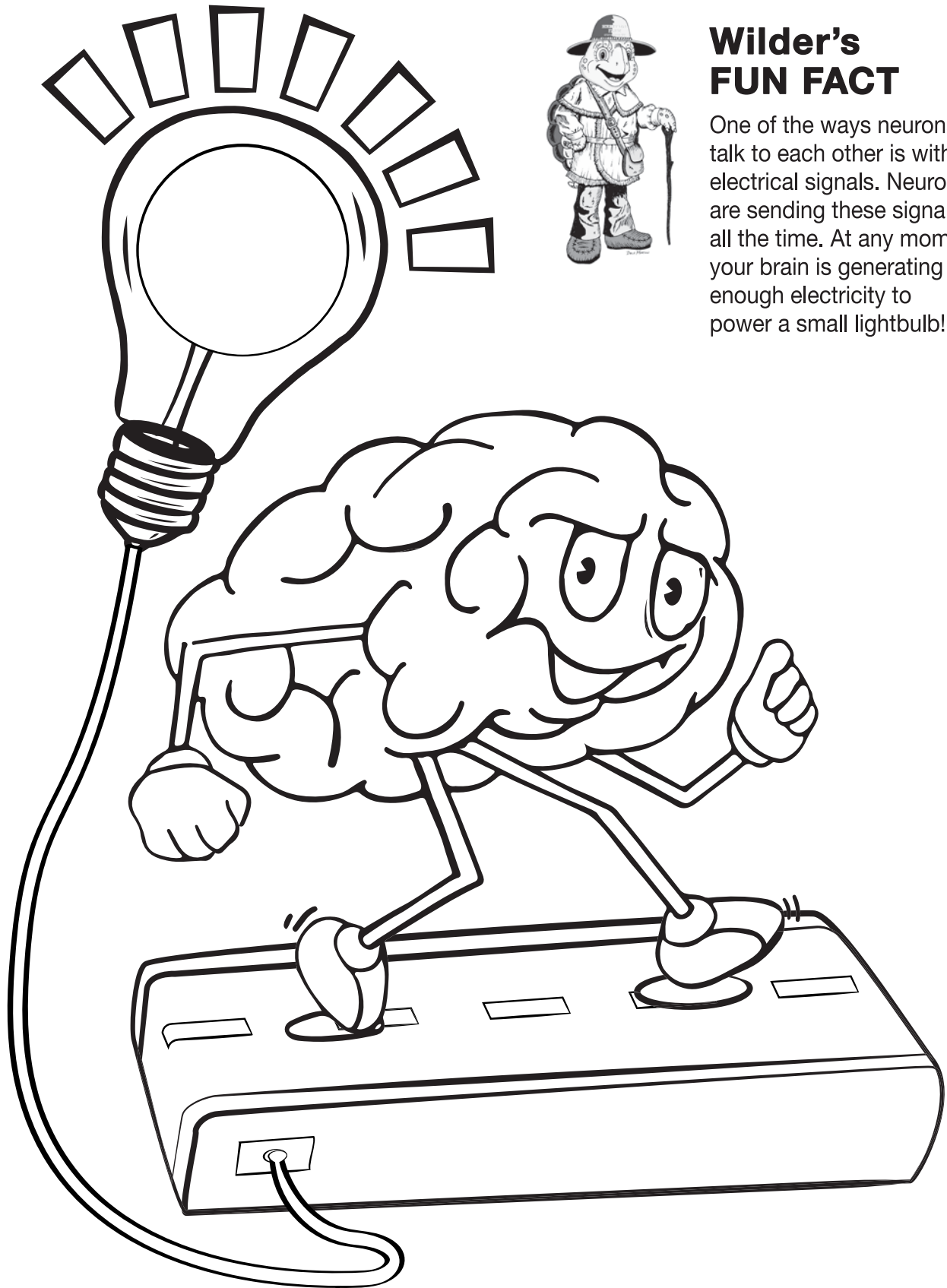
BRAIN GROWTH



Wilder's FUN FACT

The human brain grows a lot between birth and the teenage years. Everyone's brain grows and matures at different rates. Our brains reach their largest size when we are between 11 and 14 years old. Of course, the size of your brain doesn't determine how smart you are!

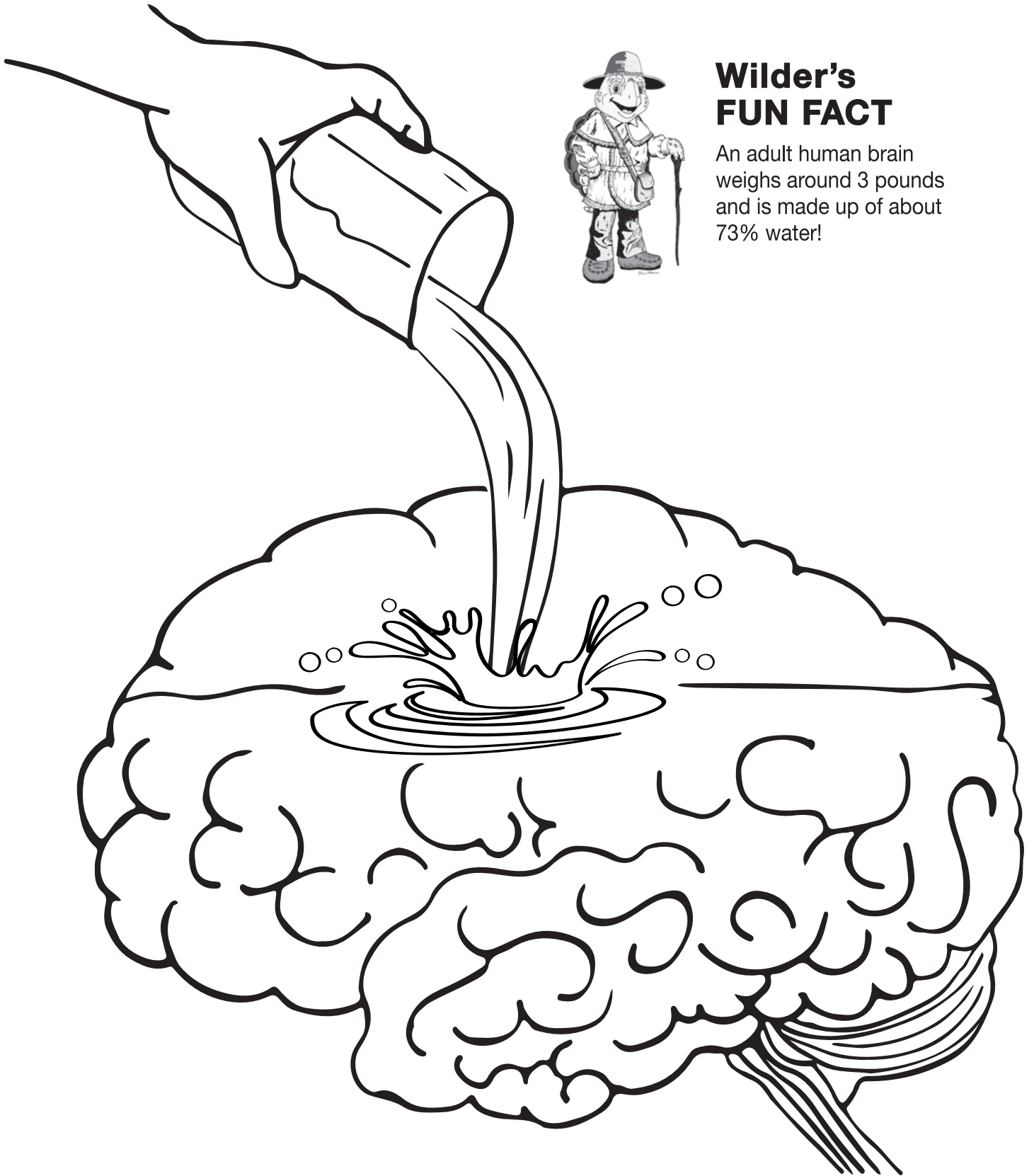
BRAIN POWER



Wilder's FUN FACT

One of the ways neurons talk to each other is with electrical signals. Neurons are sending these signals all the time. At any moment, your brain is generating enough electricity to power a small lightbulb!

WATER IN YOUR BRAIN

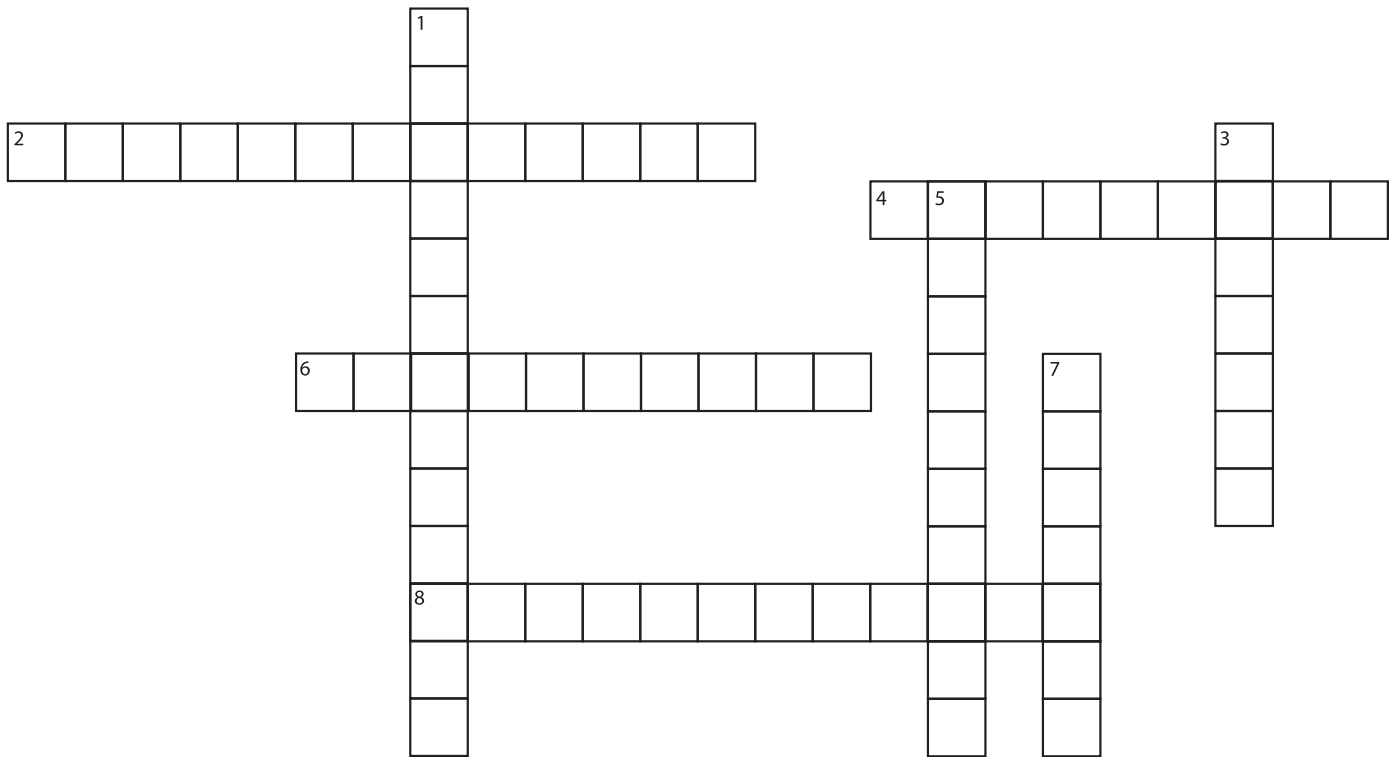


Wilder's FUN FACT

An adult human brain weighs around 3 pounds and is made up of about 73% water!

TEST YOUR KNOWLEDGE OF COMMON MENTAL HEALTH DISORDERS AND TERMS

Use the word bank to solve the crossword clues below.



WORD BANK			
Anxiety	Neuroscience	Recover	Schizophrenia
Depression	Psychotherapy	Resilience	Treatment

ACROSS

2. Another word for talk therapy, which can help people with a variety of mental disorders and emotional difficulties
4. A general word for getting medical care for a physical or mental illness
6. A mood disorder that causes people to feel extremely sad or hopeless
8. The field of study that researches how the brain works, diseases, and disorders

DOWN

1. A disorder that could make people see, hear, or believe things that are not really there
3. A general word that means to heal or get better
5. The ability to handle and recover from tough times or situations
7. A feeling of being really worried or fearful

ANSWERS CAN BE FOUND ON PAGE 12.

A CRYPTIC MESSAGE ABOUT THE BLOOD VESSELS IN YOUR BRAIN

Solve the math problems, then use the letters below your answers to decode the hidden message in the blanks below.

$30 - 2$	3×0	$50 + 6$	2×1	$25 - 4$	$27 - 2$	6×1	$30 + 5$	$20 - 2$	$10 + 6$	1×5	$100 - 10$	$30 + 2$
A	B	C	D	E	F	G	H	I	J	K	L	M

3×1	$15 + 9$	$60 - 3$	1×1	$50 - 10$	2×2	$60 + 6$	$8 + 4$	$40 + 20$	2×7	$25 - 5$	$50 - 20$	$90 - 9$
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

HIDDEN MESSAGE

$\frac{30}{12}$ $\frac{24}{12}$ $\frac{40}{12}$ $\frac{0}{12}$ $\frac{40}{12}$ $\frac{28}{12}$ $\frac{18}{12}$ $\frac{3}{12}$ $\frac{35}{12}$ $\frac{28}{12}$ $\frac{4}{12}$ $\frac{28}{12}$ $\frac{0}{12}$ $\frac{24}{12}$ $\frac{12}{12}$ $\frac{66}{12}$ $\frac{120,000}{12}$

$\frac{32}{12}$ $\frac{18}{12}$ $\frac{90}{12}$ $\frac{21}{12}$ $\frac{4}{12}$ $\frac{24}{12}$ $\frac{25}{12}$ $\frac{0}{12}$ $\frac{90}{12}$ $\frac{24}{12}$ $\frac{24}{12}$ $\frac{2}{12}$ $\frac{60}{12}$ $\frac{21}{12}$ $\frac{4}{12}$ $\frac{4}{12}$ $\frac{21}{12}$ $\frac{90}{12}$ $\frac{4}{12}$

$\frac{18}{12}$ $\frac{25}{12}$ $\frac{30}{12}$ $\frac{24}{12}$ $\frac{12}{12}$ $\frac{90}{12}$ $\frac{28}{12}$ $\frac{18}{12}$ $\frac{2}{12}$ $\frac{24}{12}$ $\frac{12}{12}$ $\frac{66}{12}$ $\frac{28}{12}$ $\frac{90}{12}$ $\frac{90}{12}$ $\frac{66}{12}$ $\frac{35}{12}$ $\frac{21}{12}$

$\frac{0}{12}$ $\frac{90}{12}$ $\frac{24}{12}$ $\frac{24}{12}$ $\frac{2}{12}$ $\frac{60}{12}$ $\frac{21}{12}$ $\frac{4}{12}$ $\frac{4}{12}$ $\frac{21}{12}$ $\frac{90}{12}$ $\frac{4}{12}$ $\frac{18}{12}$ $\frac{3}{12}$ $\frac{30}{12}$ $\frac{24}{12}$ $\frac{12}{12}$ $\frac{40}{12}$

$\frac{0}{12}$ $\frac{40}{12}$ $\frac{28}{12}$ $\frac{18}{12}$ $\frac{3}{12}$ $\frac{21}{12}$ $\frac{3}{12}$ $\frac{2}{12}$ $\frac{66}{12}$ $\frac{24}{12}$ $\frac{21}{12}$ $\frac{3}{12}$ $\frac{2}{12}$ $\frac{66}{12}$ $\frac{35}{12}$ $\frac{21}{12}$ $\frac{30}{12}$

$\frac{14}{12}$ $\frac{24}{12}$ $\frac{12}{12}$ $\frac{90}{12}$ $\frac{2}{12}$ $\frac{4}{12}$ $\frac{66}{12}$ $\frac{40}{12}$ $\frac{21}{12}$ $\frac{66}{12}$ $\frac{56}{12}$ $\frac{35}{12}$ $\frac{35}{12}$ $\frac{28}{12}$ $\frac{90}{12}$ $\frac{25}{12}$ $\frac{14}{12}$ $\frac{28}{12}$ $\frac{30}{12}$

$\frac{66}{12}$ $\frac{24}{12}$ $\frac{66}{12}$ $\frac{35}{12}$ $\frac{21}{12}$ $\frac{32}{12}$ $\frac{24}{12}$ $\frac{24}{12}$ $\frac{3}{12}$!

ANSWERS CAN BE FOUND ON PAGE 13.

FASTER THAN A SPEEDING NEURON!

Unscramble the words below by rearranging the order of the letters. Then use those words to fill in the blanks in the paragraph below, and learn more about how fast the neurons in your brain work!

T R O O M

N A I R T

R U N N E O S

S A G E M E S S

L A N G I S S

L I O N S M I L

A F S T

L C M E H A C I

There are _____ of _____ in your brain

that tell your whole body what to do. These neurons use electrical and

_____ signals to send billions of _____

every day that help you think, feel, and do amazing things.

They send information to and from your brain at more than 150 miles

per hour, which is as fast as a _____ . But if you need to

act quickly, _____ neurons can send _____

at more than 200 miles per hour. That's _____ !

ANSWERS CAN BE FOUND ON PAGE 13.

ALL ABOUT THE BRAIN

Search up, down, forward, backward, and diagonally to find the hidden words. Put your brain to the test, and see how many you can find!

J	B	T	N	G	Z	O	T	E	H	V	X	S	X	S
C	Q	R	A	C	N	O	C	X	C	S	L	E	R	P
B	K	E	O	S	U	I	U	C	S	N	T	B	U	K
W	M	S	W	C	T	V	K	E	I	R	A	M	M	L
Q	C	E	H	E	Q	E	P	N	O	P	B	L	A	C
P	R	A	J	U	L	X	E	C	I	Q	I	N	A	T
C	E	R	E	B	E	L	L	U	M	H	G	T	L	B
P	N	C	B	R	A	I	N	U	H	U	T	A	A	H
Q	V	H	B	Q	C	J	C	E	A	Z	R	N	T	L
G	N	I	R	A	E	H	Z	G	S	O	B	E	E	A
C	R	O	I	V	A	H	E	B	P	S	T	U	I	T
E	M	O	T	I	O	N	S	M	L	M	P	R	R	N
E	B	O	L	G	Z	H	E	P	S	E	A	O	A	O
W	A	Z	P	G	W	T	X	X	N	L	T	N	P	R
G	B	P	E	J	S	X	V	C	W	L	R	S	B	F

BALANCE

CEREBELLUM

FRONTAL

LOBE

PARIETAL

TASTE

TOUCH

BEHAVIOR

CORTEX

HEARING

NEURONS

RESEARCH

TEMPORAL

WELLNESS

BRAIN

EMOTIONS

LANGUAGE

OCCIPITAL

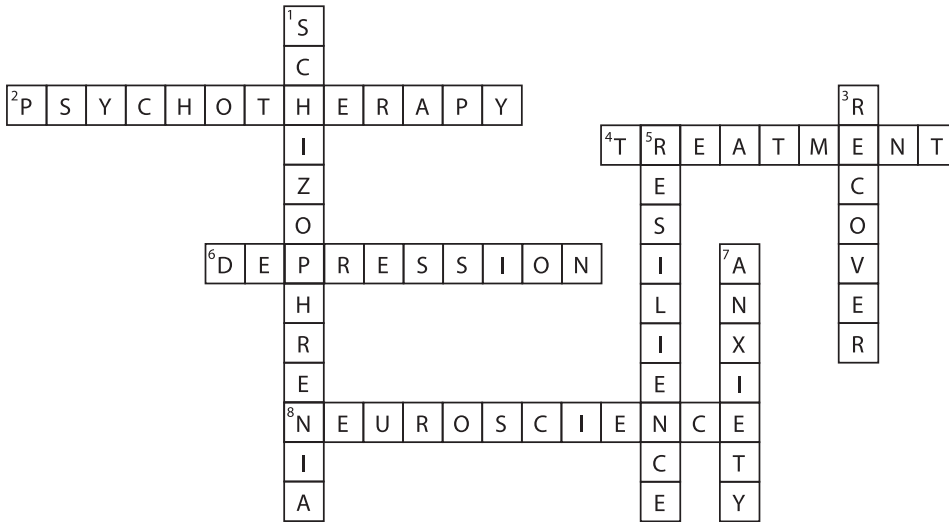
SMELL

THINKING

ANSWERS CAN BE FOUND ON PAGE 12.

ANSWERS TO ACTIVITY PUZZLES

ANSWERS TO "TEST YOUR KNOWLEDGE OF COMMON MENTAL HEALTH DISORDERS AND TERMS"



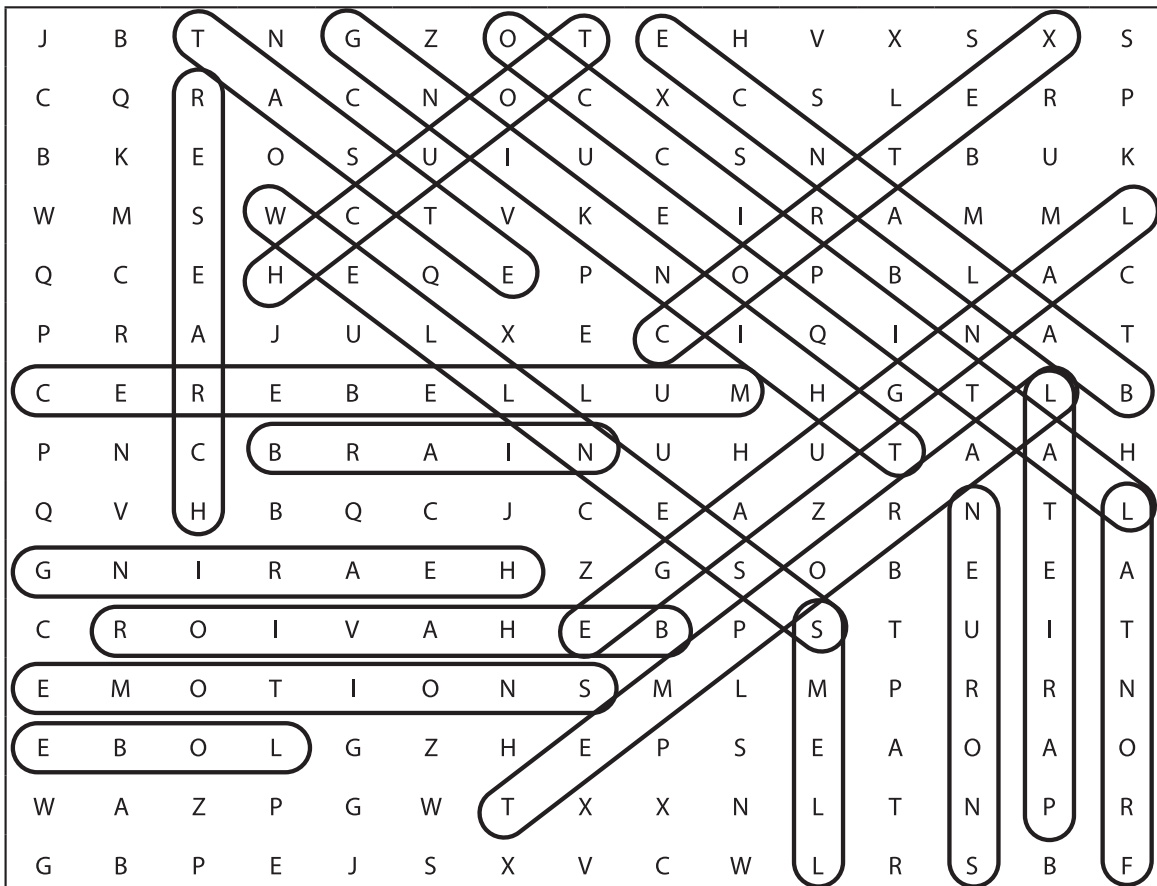
ACROSS

2. PSYCHOTHERAPY
4. TREATMENT
6. DEPRESSION
8. NEUROSCIENCE

DOWN

1. SCHIZOPHRENIA
3. RECOVER
5. RESILIENCE
7. ANXIETY

ANSWERS TO "ALL ABOUT THE BRAIN"



ANSWERS TO “A CRYPTIC MESSAGE ABOUT THE BLOOD VESSELS IN YOUR BRAIN”

30-2	3x0	50+6	2x1	25-4	27-2	6x1	30+5	20-2	10+6	1x5	100-10	30+2
28	0	56	2	21	25	6	35	18	16	5	90	32
A	B	C	D	E	F	G	H	I	J	K	L	M

3x1	15+9	60-3	1x1	50-10	2x2	60+6	8+4	40+20	2x7	25-5	50-20	90-9
3	24	57	1	40	4	66	12	60	14	20	30	81
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

ANSWERS TO “HIDDEN MESSAGE”

$\frac{Y}{30}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{r}{40}$ $\frac{b}{0}$ $\frac{r}{40}$ $\frac{a}{28}$ $\frac{i}{18}$ $\frac{n}{3}$ $\frac{h}{35}$ $\frac{a}{28}$ $\frac{s}{4}$ $\frac{a}{28}$ $\frac{b}{0}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{t}{66}$ $\frac{120,000}{}$

$\frac{m}{32}$ $\frac{i}{18}$ $\frac{l}{90}$ $\frac{e}{21}$ $\frac{s}{4}$ $\frac{o}{24}$ $\frac{f}{25}$ $\frac{b}{0}$ $\frac{l}{90}$ $\frac{o}{24}$ $\frac{o}{24}$ $\frac{d}{2}$ $\frac{v}{60}$ $\frac{e}{21}$ $\frac{s}{4}$ $\frac{s}{4}$ $\frac{e}{21}$ $\frac{l}{90}$ $\frac{s}{4}$

$\frac{l}{18}$ $\frac{f}{25}$ $\frac{y}{30}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{l}{90}$ $\frac{a}{28}$ $\frac{i}{18}$ $\frac{d}{2}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{t}{66}$ $\frac{a}{28}$ $\frac{l}{90}$ $\frac{l}{90}$ $\frac{t}{66}$ $\frac{h}{35}$ $\frac{e}{21}$

$\frac{b}{0}$ $\frac{l}{90}$ $\frac{o}{24}$ $\frac{o}{24}$ $\frac{d}{2}$ $\frac{v}{60}$ $\frac{e}{21}$ $\frac{s}{4}$ $\frac{s}{4}$ $\frac{e}{21}$ $\frac{l}{90}$ $\frac{s}{4}$ $\frac{i}{18}$ $\frac{n}{3}$ $\frac{y}{30}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{r}{40}$

$\frac{b}{0}$ $\frac{r}{40}$ $\frac{a}{28}$ $\frac{i}{18}$ $\frac{n}{3}$ $\frac{e}{21}$ $\frac{n}{3}$ $\frac{d}{2}$ $\frac{t}{66}$ $\frac{o}{24}$ $\frac{e}{21}$ $\frac{n}{3}$ $\frac{d}{2}$ $\frac{t}{66}$ $\frac{h}{35}$ $\frac{e}{21}$ $\frac{y}{30}$

$\frac{w}{14}$ $\frac{o}{24}$ $\frac{u}{12}$ $\frac{l}{90}$ $\frac{d}{2}$ $\frac{s}{4}$ $\frac{t}{66}$ $\frac{r}{40}$ $\frac{e}{21}$ $\frac{c}{66}$ $\frac{h}{56}$ $\frac{h}{35}$ $\frac{a}{28}$ $\frac{l}{90}$ $\frac{f}{25}$ $\frac{w}{14}$ $\frac{a}{28}$ $\frac{y}{30}$

$\frac{t}{66}$ $\frac{o}{24}$ $\frac{t}{66}$ $\frac{h}{35}$ $\frac{e}{21}$ $\frac{m}{32}$ $\frac{o}{24}$ $\frac{o}{24}$ $\frac{n}{3}$

ANSWERS TO “FASTER THAN A SPEEDING NEURON!” *Unscrambled words*

There are **MILLIONS** of **NEURONS** in your brain that tell your whole body what to do. These neurons use electrical and **CHEMICAL** signals to send billions of **MESSAGES** every day that help you think, feel, and do amazing things. They send information to and from your brain at more than 150 miles per hour, which is as fast as a **TRAIN**. But if you need to act quickly, **motor** neurons can send **SIGNALS** at more than 200 miles per hour. That's **FAST!**

MOTOR
NEURONS
SIGNALS
FAST
TRAIN
MESSAGES
CHEMICAL
MILLIONS



ARE YOU A TEACHER?

Discover more educational materials.

SCAN THE CODE:



Adapted from the



National Institute
of Mental Health

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AND HUMAN SERVICES
National Institutes of Health
NIH Publication No. 23-MH-8117

For more information about mental health,
visit the NIMH website at www.nimh.nih.gov.
For information on a wide variety of health
topics, visit the National Library of Medicine's
MedlinePlus service at <https://medlineplus.gov>.

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