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Ready-to-Use English Lessons by Sean Banville

Level 5 – 7th October 2024

Mapping of fruit fly brain to change neuroscience

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https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

Contents

Please try Levels 4 and 6. They are (a little) harder.

THE READING

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

Scientists have created a map of a fruit fly's brain. The map of the neurons and connections is the most detailed ever produced for a creature. This feat could revolutionize neuroscience and unlock secrets about our own brain. A brain specialist told the BBC: "The mapping of the fly brain is really remarkable and will help us get a real grasp of how our own brains work." He said it could help us look into "the mechanism of thought". It took scientists many years to analyze the fly's pinhead-sized brain. They created a diagram of 139,255 neurons and 50 million connections.

The diagram looks like a work of art. It is a beautiful, colourful web of neurons. The map is known as a connectome. Scientists sliced the fruit fly's brain into 7,000 microscopic pieces. These were studied with an electron microscope. This imaged cells that were four-millionths of a millimetre wide. The researchers classified 8,400 cell types. If the neural pathways were unravelled, they would stretch for 150 metres. The human brain has 86 billion neurons and trillions of connections. It will be many years before technology can map it.

Sources: https://www.**bbc.com**/news/articles/c0lw0nxw71po
https://www.**nature.com**/articles/d41586-024-03190-y
https://www.**theguardian.com**/science/2024/oct/02/fruit-fly-brain-connections-wiring-diagram-neuroscience

PHRASE MATCHING

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

PARAGRAPH ONE:

1. a map of a	a. about our own brain
2. The map of	b. produced
3. the most detailed ever	c. of thought
4. This feat could revolutionize	d. grasp
5. unlock secrets	e. fruit fly's brain
6. help us get a real	f. neuroscience
7. help us look into the mechanism	g. sized brain
8. the fly's pinhead-	h. the neurons

PARAGRAPH TWO:

1. The diagram looks like a work	a. microscopic pieces
2. It is a beautiful, colourful	b. a millimetre wide
3. The map is known	c. can map it
4. sliced the fruit fly's brain into 7,000	d. as a connectome
5. These were studied with an electron	e. unravelled
6. four-millionths of	f. of art
7. neural pathways were	g. microscope
8. It will be many years before technology	h. web of neurons

LISTEN AND FILL IN THE GAPS

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

Scientists have (1) _____ of a fruit fly's brain. The map of the neurons and connections is the most detailed ever produced (2) _____. This feat could revolutionize neuroscience and (3) _____ our own brain. A brain specialist told the BBC: "The mapping of the fly brain is really remarkable and will help us get (4) _____ of how our own brains work." He said it could help us look into "the (5) _____". It took scientists many years to analyze the fly's pinhead-sized brain. They (6) _____ of 139,255 neurons and 50 million connections.

The diagram looks like a (7) _____. It is a beautiful, colourful web of neurons. The map is known as a connectome. Scientists (8) _____ fly's brain into 7,000 microscopic pieces. These were studied with an electron microscope. This imaged cells that (9) _____ of a millimetre wide. The researchers classified 8,400 cell types. If the (10) _____ unravelled, they would stretch for 150 metres. The human brain has 86 (11) _____ trillions of connections. It will be many years before technology (12) _____.

PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

Scientistshavecreatedamapofafruitfly'sbrain.Themapoftheneurons andconnectionsisthemostdetailedeverproducedforacreature.Thisfe atcouldrevolutionizeneuroscienceandunlocksecretsaboutourownbr ain.AbrainspecialisttoldtheBBC:"Themappingoftheflybrainisreallyre markableandwillhelpusgetarealgraspofhowourownbrainswork."Hes aiditcouldhelpuslookinto"themechanismofthought".Ittookscientists manyyearstoanalyzethefly'spinhead-sizedbrain.Theycreatedadia gramof139,255neuronsand50millionconnections.Thediagramlooksl ikeaworkofart.Itisabeautiful,colourfulwebofneurons.Themapisknow nasaconnectome.Scientistsslicedthefruitfly'sbraininto7,000microsc opicpieces.Thesewerestudiedwithanelectronmicroscope.Thisimage dcellsthatwerefour-millionthsofamillimetrewide.Theresearcherscl assified8,400celltypes.Iftheneuralpathwayswereunravelled,theyw ouldstretchfor150metres.Thehumanbrainhas86billionneuronsandtr illionsofconnections.Itwillbemanyyearsbeforetechnologycanmapit.

OUR BRAIN SURVEY

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-4.html

Write five GOOD questions about our brain in the table. Do this in pairs. Each student must write the questions on his / her own paper.
When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student A: Do not show these to your speaking partner(s).

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

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WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student B: Do not show these to your speaking partner(s).

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

WRITING

From https://breakingnewsenglish.com/2410/241007-fruit-fly-brain-5.html

Write about **our brain** for 10 minutes. Read and talk about your partner's paper.