

B1-B2 English Worksheet

The Lizard Brain Myth: What Modern Neuroscience Says About the Human Brain

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Article

For years, people have been told that humans have a "lizard brain" hidden beneath the more modern parts of the brain. The idea caught on because it is simple: an ancient reptile-like area controls basic survival, a mammal area handles emotion, and a newer outer layer produces reason and language. The model is linked to neuroscientist Paul MacLean's mid-20th-century "triune brain" theory. A recent Guardian feature shows why many people still hold on to it, even though modern neuroscience says the picture is too neat.

The brain does contain older and newer features, but the three-layer story breaks down when scientists compare different species. Reptiles do not have only a primitive survival brain, and mammals did not simply add a completely separate emotional and rational brain on top. Researchers point out that many brain structures have ancient relatives across vertebrates and have changed together over time. Emotion and thinking are also deeply connected. Scientists continue to look into specialised brain systems, but they do not divide neatly into instinct, emotion and reason.

So why does the myth refuse to disappear? Easy explanations are easier to take in, teach and pass on. They can also turn up in self-help, advertising, management training and online articles. Search engines and AI tools may repeat familiar claims if unreliable sources are common. The lizard brain story can still be useful as a metaphor for strong impulses, but it should not be treated as a map of the brain. To keep up with science, people sometimes need to let go of ideas they learned at school and fall back on reliable evidence when a familiar story no longer holds up.

True/False

Decide if each statement is True (T) or False (F).

No.	Statement	T / F
1	The lizard brain idea divides the brain into areas for survival, emotion and reason.	
2	Modern neuroscience accepts the three-layer model as an accurate map of the brain.	
3	The article says reptiles possess only a primitive survival brain.	
4	Researchers find related brain structures across different vertebrate species.	
5	The article presents emotion and thinking as completely independent processes.	
6	Simple explanations can spread because they are easier to understand and teach.	
7	Search engines and AI tools can repeat familiar claims from unreliable sources.	
8	The writer says the lizard brain metaphor should be treated as a literal brain map.	

Phrase Match

Match the phrases (1-10) to the correct definitions (A-J).

Phrases (1-10)	Definitions (A-J)
1. caught on	A. draw attention to an important fact
2. hold on to	B. give information or an idea to other people
3. breaks down	C. use something as an alternative when it is needed
4. point out	D. continue to keep or believe something
5. look into	E. understand or absorb information
6. take in	F. stay informed about new developments
7. pass on	G. become popular or widely accepted
8. turn up	H. investigate or examine something
9. keep up with	I. appear, often unexpectedly
10. fall back on	J. stop working as an explanation or argument

Synonym Match

Match the words (1-10) to the correct synonyms (A-J).

Words (1-10)	Synonyms (A-J)
1. ancient	A. linked
2. modern	B. straightforward
3. separate	C. current
4. rational	D. untrustworthy
5. connected	E. logical
6. familiar	F. widespread
7. unreliable	G. helpful
8. useful	H. old
9. simple	I. well-known
10. common	J. distinct

Use the New Language

Choose 5 words or phrases from the worksheet and write your own sentences.

No.	Your sentence
1	
2	
3	
4	
5	

Discussion Questions

Student A	Student B
1. Before today, had you heard the term "lizard brain"? What did you think it meant?	1. Why do weak ideas sometimes catch on even when better evidence is available?
2. What fact did you learn at school that you later had to let go of or update?	2. Should schools use simplified scientific models if they clearly explain that those models are incomplete?
3. Have you ever believed a scientific fact because you had heard it many times?	3. Should advertisers be allowed to use scientific language if most customers cannot check the claim?
4. Where do scientific claims most often turn up in your daily life: adverts, social media, podcasts or news?	4. Do people sometimes confuse popularity with evidence because a claim appears everywhere?
5. When an AI tool or search engine gives you an answer, how do you decide whether to trust it?	5. Should AI and search tools point out when an answer is uncertain, disputed or based on outdated information?
6. Which scientific myth have you heard people pass on most often?	6. How quickly should schools and textbooks keep up with changes in scientific knowledge?
7. Do simple explanations help you take in difficult ideas, or can they be misleading?	7. Why do people hold on to scientific myths after experts have rejected them?
8. When have you changed your mind because new evidence was stronger than what you believed before?	8. What makes a source reliable enough to fall back on when different websites give different answers?

Answer Key

True/False	1=T, 2=F, 3=F, 4=T, 5=F, 6=T, 7=T, 8=F
Phrase Match	1=G, 2=D, 3=J, 4=A, 5=H, 6=E, 7=B, 8=I, 9=F, 10=C
Synonym Match	1=H, 2=C, 3=J, 4=E, 5=A, 6=I, 7=D, 8=G, 9=B, 10=F

Example Sentences With the Phrases

No.	Example sentence
1	The simple explanation caught on quickly because it was easy to remember.
2	People often hold on to ideas they learned when they were young.
3	A theory breaks down if it cannot explain new evidence.
4	Good teachers point out when a popular story is only a metaphor.
5	Scientists look into how different brain networks work together.
6	A clear diagram can help students take in difficult information.
7	People sometimes pass on a myth without checking where it came from.
8	Old claims can turn up again in videos and social media posts.
9	Textbooks need regular updates to keep up with new research.
10	When an online claim seems doubtful, fall back on reliable sources.