

Brain Basics — Worksheet

Student-friendly neuroscience: parts of the brain, memory systems, transmitters, and sleep.

Multiple Choice

1. Which lobe primarily processes vision?

- ☐ A) Frontal
- ☐ B) Occipital
- ☐ C) Parietal
- ☐ D) Temporal

2. The hippocampus is crucial for:

- ☐ A) Balance and timing
- ☐ B) Forming new memories
- ☐ C) Vision
- ☐ D) Breathing control

3. Which structure keeps vital functions running automatically?

- ☐ A) Cerebellum
- ☐ B) Brainstem
- ☐ C) Amygdala
- ☐ D) Frontal lobe

4. Hearing and language comprehension mostly belongs to:

- ☐ A) Temporal lobe
- ☐ B) Parietal lobe
- ☐ C) Occipital lobe
- ☐ D) Frontal lobe

5. Which structure best fine-tunes timing for skilled movement?

- ☐ A) Cerebellum
- ☐ B) Hippocampus
- ☐ C) Amygdala
- ☐ D) Temporal lobe

Short Answer

1. Explain how NREM and REM sleep each support learning in different ways.

2. Give an example where dopamine prediction error might speed up learning.

Extra Practice (Optional)

- Which lobe is most involved in impulse control and planning? (Frontal)
- Which habit after studying most improves long-term recall? (Sleep plus spaced retrieval)
- Anxiolytics that potentiate which transmitter increase inhibition? (GABA)
- Which memory stores the fact that Paris is the capital of France? (Semantic)
- Which sleep stage is tied to creative recombination? (REM)
- Working memory primarily holds information for... (seconds)
- Damage to the hippocampus would most affect... (forming new episodic memories)
- Acetylcholine in cortex tends to boost... (attention and learning)
- The cerebellum best supports... (timing and fine motor control)
- Parietal lobe maps help you... (judge location and spatial relations)