

THE MYSTERIES OF DREAMS



By Merrilee Gallagher





Questions?

Questions I have

Do our dreams have meaning
are or are they simply just
meaningless parts of our
subconscious?

Why do we dream?

Can dreams help consolidate
memory's or solve problems?

Questions other people have

Does dreaming help us process
memories?

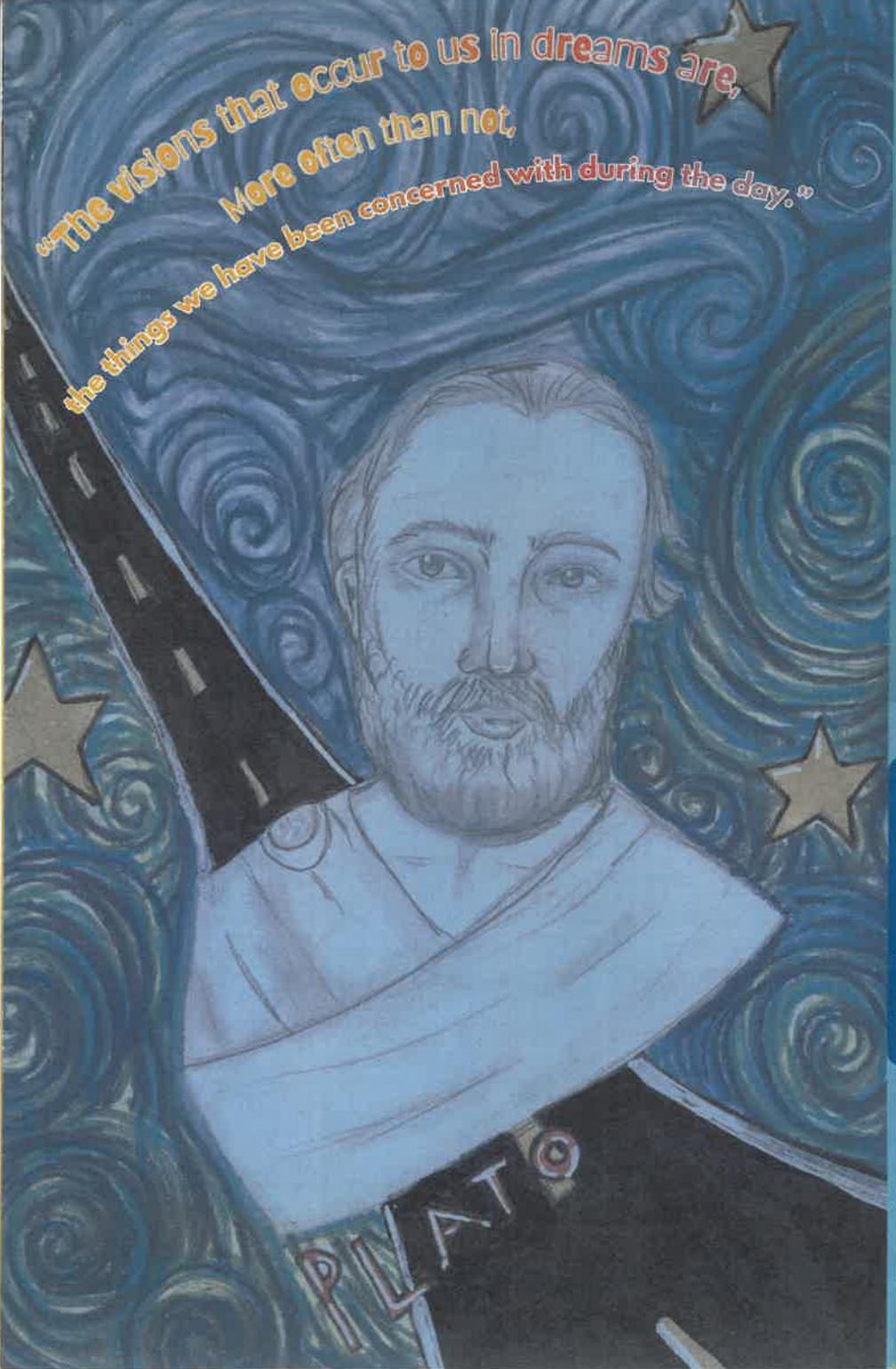
Are dreams a better way to
understand our emotions?

Do dreams predict the
future?

What do common dream
symbols mean?

How does brain activity in
the limbic system, visual
cortex, and prefrontal cortex
shape dream content?





**"The visions that occur to us in dreams are,
More often than not,
the things we have been concerned with during the day."**

Learning about Plato

What Plato Believes

Plato believed dreams revealed the hidden, irrational desires of the soul, showing what reason suppresses during waking life. He used dreams both literally and metaphorically in his dialogues to explore human nature, knowledge, and morality.

Quotes

"The visions that occur to us in dreams are, more often than not, the things we have been concerned with during the day." (The Republic)
"Most of what passes for human knowledge is like a dream, and only philosophy can awaken us." (Republic, 520B-C; echoed in Apology, 31A)
"When the reasoning and rational part of the soul sleeps, the wild beast in us, full of food, starts up and gambols, and indulges in every kind of lawless fancy." (The Republic, Book IX)

His Background

- **Lived:** 427–347 BCE in Athens, Greece.
- **Role:** Student of Socrates, teacher of Aristotle, and founder of the Academy, one of the first institutions of higher learning in the Western world.
- **Works:** Wrote philosophical dialogues such as *The Republic*, *Phaedo*, *Apology*, and *Symposium*.
- **Influence:** His ideas shaped Western philosophy, politics, ethics, and metaphysics for centuries.

Learning about Aristotle

Aristotle (384–322 BCE) was a Greek philosopher who believed dreams were natural phenomena rooted in sense perception, not divine messages. He saw them as byproducts of residual sensory impressions rather than supernatural prophecies.

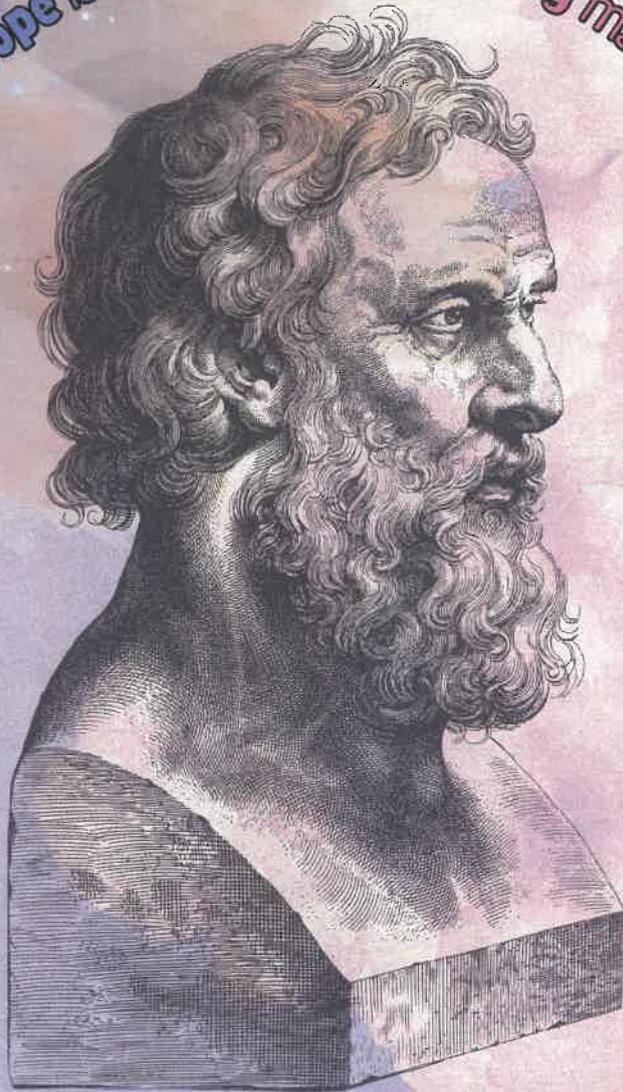
While he acknowledged that some dreams might coincidentally align with future events, he rejected the idea that dreams were reliable omens.

Residual perception: He believed dreams occur when sense organs rest but residual movements remain, producing images in sleep.

“For often, when one is asleep, there is something in consciousness which declares that what then presents itself is but a dream.”

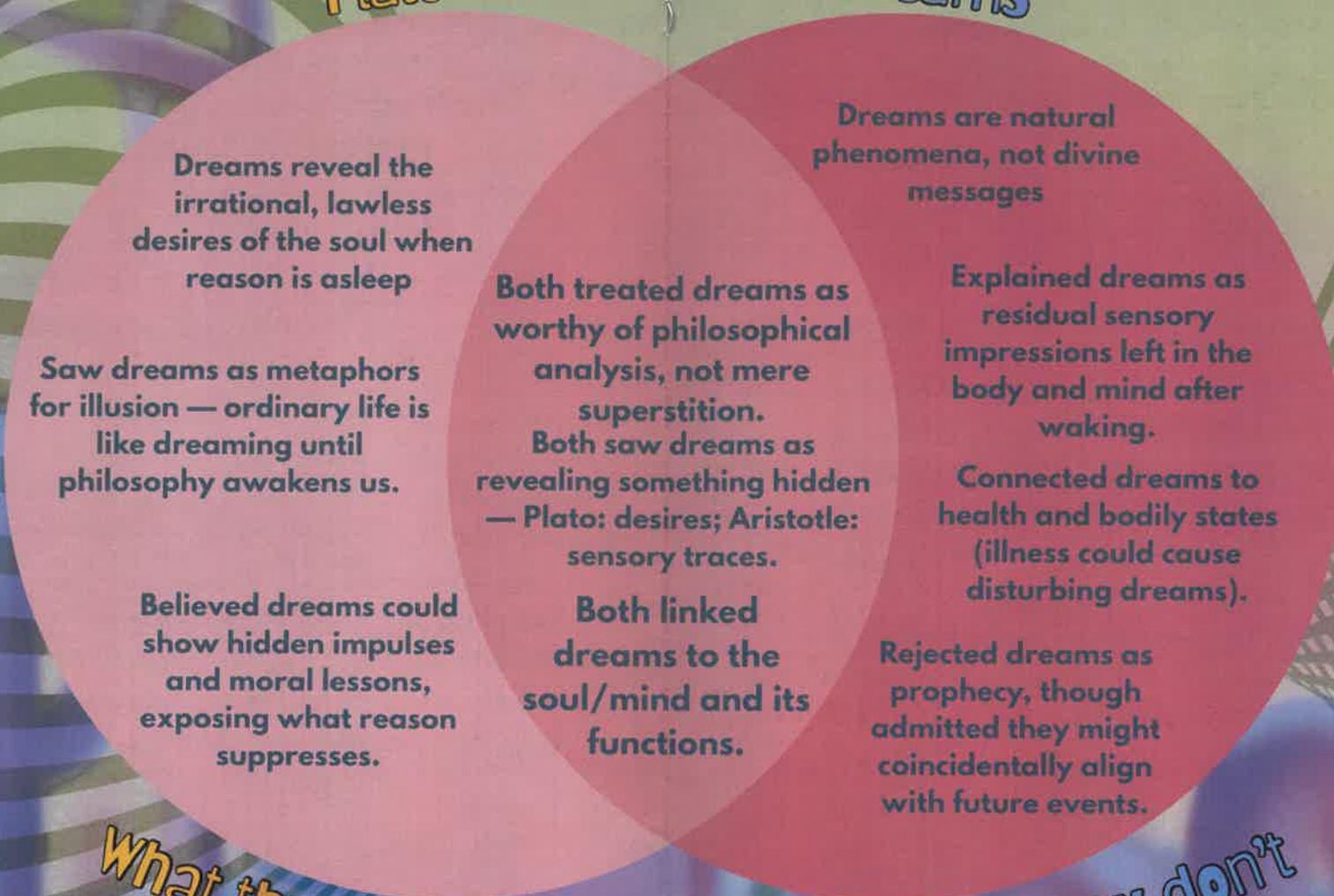
“Dreams are not sent by God; they are the result of residual impressions.”

“Hope is the dream of a waking man”



-Aristotle

Plato vs. Aristotle on Dreams



What they have in common vs what they don't

What Freud accomplished and his theories

Dreams as wish-fulfillment: Freud argued that dreams are disguised fulfillments of repressed, unconscious wishes.
“Royal road to the unconscious”: He famously called dreams the royal road to understanding the unconscious mind.

Manifest vs. latent content:

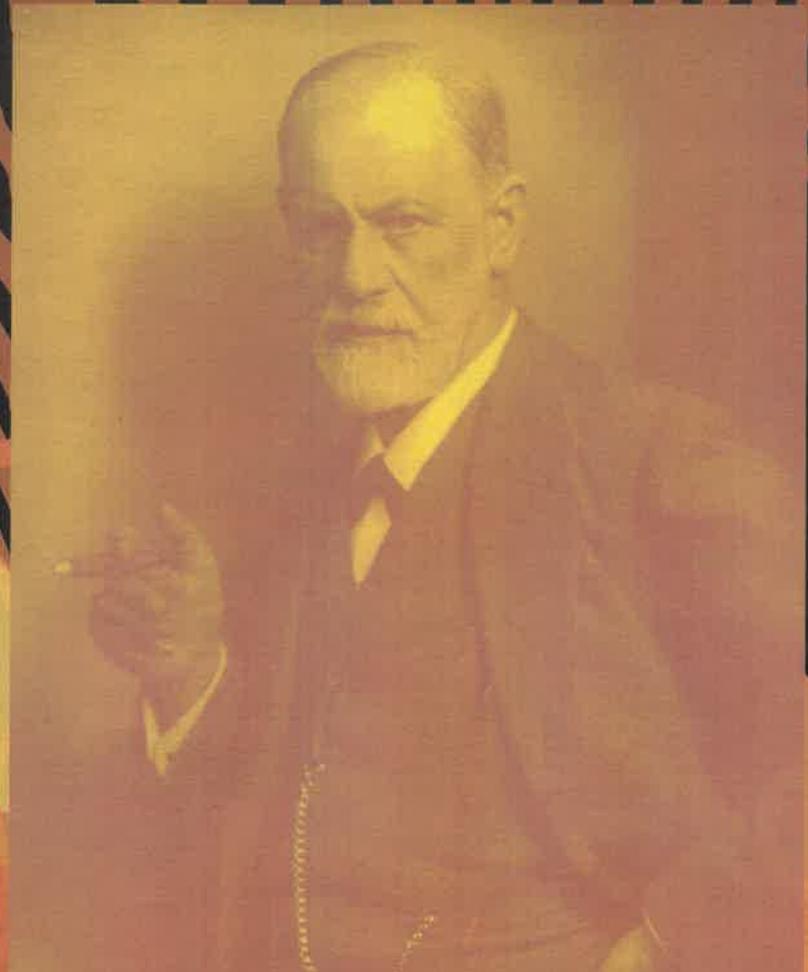
Manifest content = the dream as remembered (the storyline, images).

Latent content = the hidden meaning, often linked to forbidden desires or unresolved conflicts.

His ideas opened the door to modern psychology’s focus on unconscious processes. Even though many of his interpretations are debated today, the distinction between manifest and latent content remains influential in dream research.

Freud’s work inspired later thinkers like Carl Jung, who expanded dream theory in new directions.

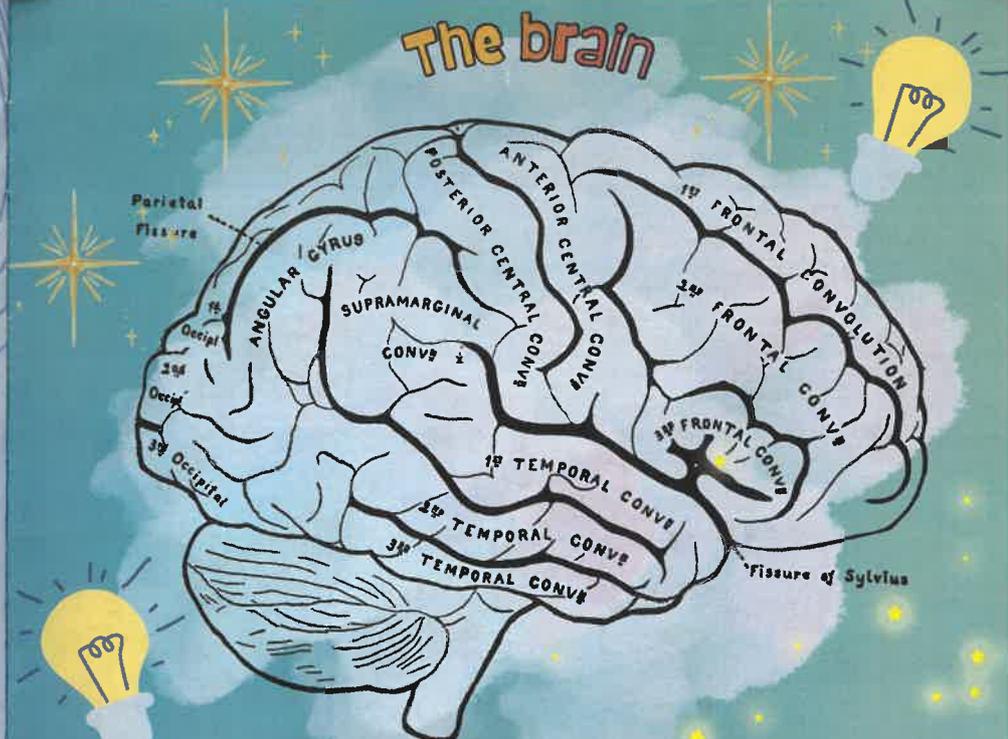
Freud’s Dream Psychology: Psychoanalysis for Beginners distilled his revolutionary claim that dreams are the disguised fulfillment of unconscious wishes. He argued that the dream’s surface story (manifest content) hides a deeper truth (latent content), revealed through processes like condensation and displacement. For Freud, dreams were the “royal road to the unconscious,” offering insight into repressed desires, especially sexual ones, and serving the function of preserving sleep. This book made psychoanalysis accessible to general readers, spreading the idea that dreams are meaningful psychological events rather than random mental noise.



Sigmund Freud

(1856–1939) was the founder of psychoanalysis, and he revolutionized how we understand the mind. His greatest accomplishment was developing a theory of the unconscious and showing how dreams reveal hidden desires.

The brain



Each parts of the brain and what they do

Limbic System

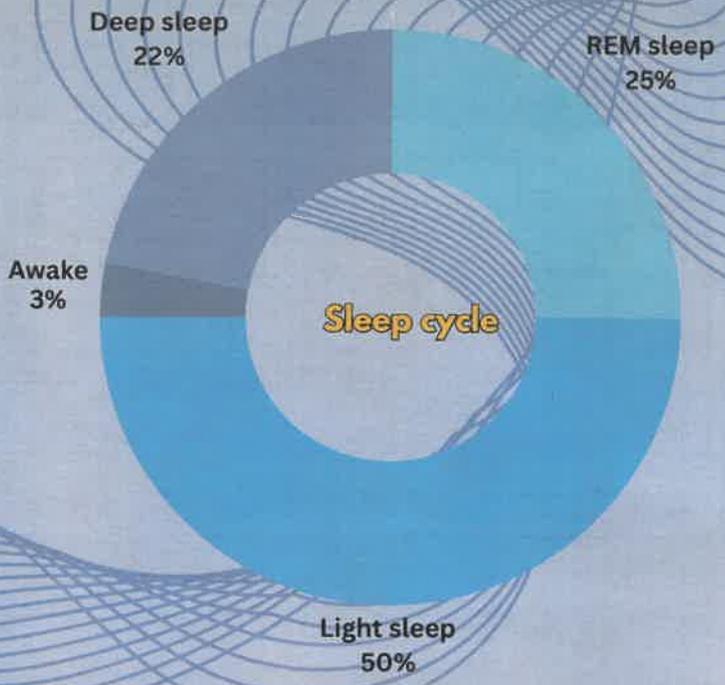
The limbic system acts as the emotional canvas of dreams, the amygdala fuels emotional intensity, the hippocampus stitches memory fragments into dream stories, and together they make dreams both bizarre and deeply meaningful.

The Visual Cortex

The visual cortex, located in the occipital lobe, is the brain's primary center for processing visual information. During REM sleep, it becomes highly active, producing the detailed images, colors, and motion that make dreams feel like waking vision.

The Prefrontal Cortex

During REM sleep, the prefrontal cortex (PFC) is responsible for reasoning, planning, and self-control, is much less active than when awake. This is why dreams often lack logical consistency and why improbable events feel normal.



AI decoding and how it works with dreams

We are moving into a different timeline, and now AI might be used to decode our dreams. Scientists have used functional Magnetic Resonance Imaging and Electroencephalography to record the activity of our brains.

This could provide special input into what we are thinking and feeling when we are dreaming. AI identifies correlations between brain wave patterns and specific images or themes. AI still does not prove if it could mean something for our future, but it could still provide a closer theory into the world of dreams.

There has been some controversy around using AI. Dr. Michael D'Souza states, "There's a fine line between understanding and invasion of privacy."

Dream habits in a large cohort of preteens and their relation to sleep and nocturnal awakenings

Background on Jean-Baptiste Eichenlaubs study

In a 2023 study of over 1,100 preteens, Jean-Baptiste Eichenlaub and colleagues found that nearly half reported frequent dreams, while two-thirds remembered dreams weekly. Nightmares were relatively rare, but children who experienced them often also reported more nighttime awakenings. These findings suggest that dream habits are not just curiosities, they are closely linked to sleep quality and emotional development during adolescence.

Statistics

52.0% nightmares are rare

49.2% dream often

69.5% remember dreams weekly

45.5% lucid dreams are uncommon

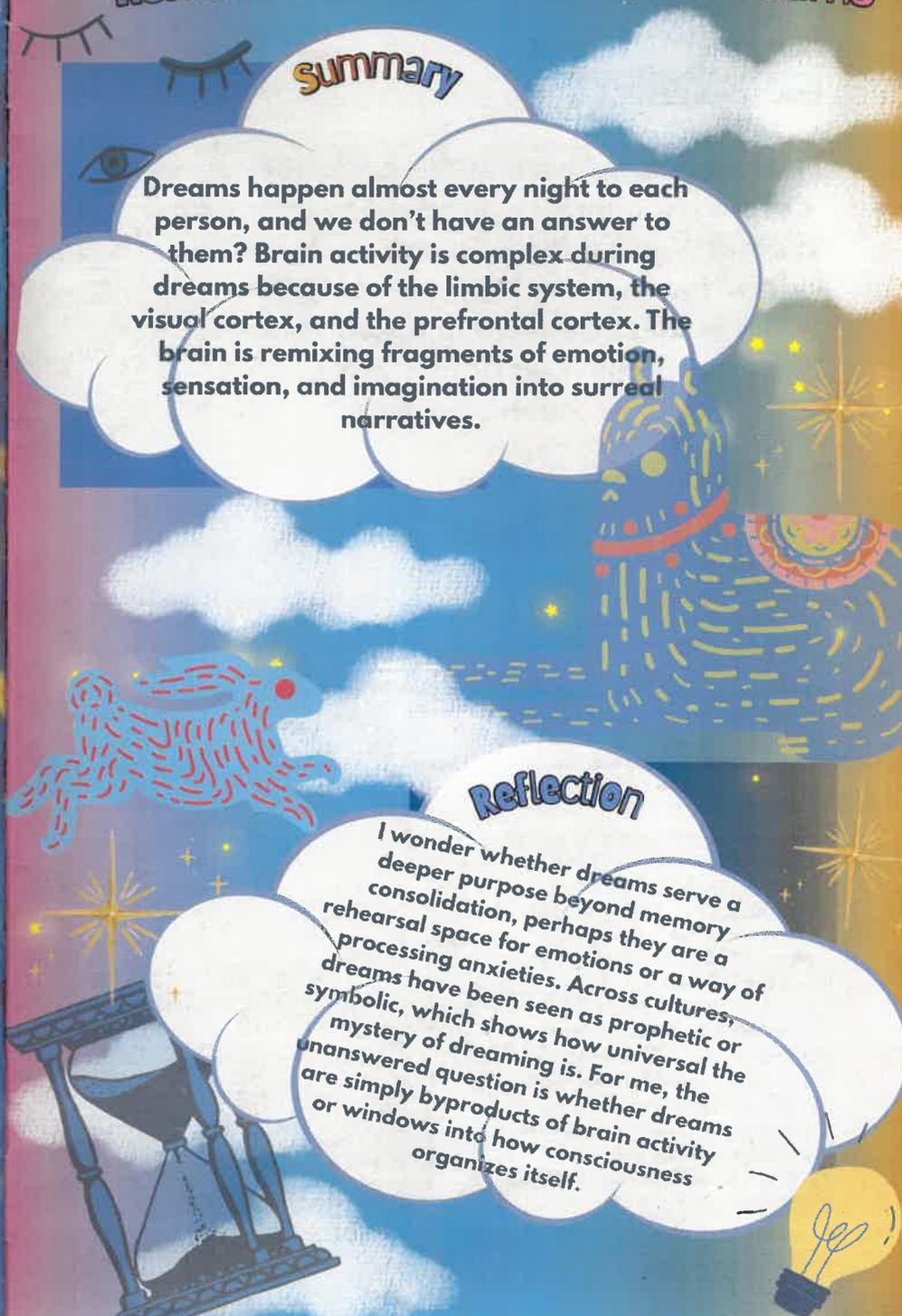
Reflections and summary of dreams

summary

Dreams happen almost every night to each person, and we don't have an answer to them? Brain activity is complex during dreams because of the limbic system, the visual cortex, and the prefrontal cortex. The brain is remixing fragments of emotion, sensation, and imagination into surreal narratives.

Reflection

I wonder whether dreams serve a deeper purpose beyond memory consolidation, perhaps they are a rehearsal space for emotions or a way of processing anxieties. Across cultures, dreams have been seen as prophetic or symbolic, which shows how universal the mystery of dreaming is. For me, the unanswered question is whether dreams are simply byproducts of brain activity or windows into how consciousness organizes itself.



How I got interested in this topic

Explanation:

I became interested in this topic because of a dream I had that inspired me to create an art piece. I wanted to understand why our brains function the way they do and how we can form these detailed images in our minds while sleeping. I want to know if our dreams have meaning.

Credits

Written and compiled by Merrilee Gallagher

Based on research from multiple different sources, such as,

- MBT Desk, "Decoding Dreams: Can AI Finally Tell Us What They Mean?" (Medbound Times, 2025)

- Jean-Baptiste Eichenlaub et al., "Dream Habits in Preteens" (Journal of Sleep Research, 2025)

- Sigmund Freud, "Dream Psychology: Psychoanalysis for Beginners" (2020 edition)

- Marti, "12 Scientific Studies on Dreaming" (Dream and Meaning, 2025)

- Laura Palagini, John S. Antrobus, & Daniel B. Kay, "Dreaming, the Brain and Mental Functioning" (Sleep Psychology, 2024)

- Bryony Shaw, "Developments in the Neuroscience of Dreams" (Activitas Nervosa Superior, 2016)

