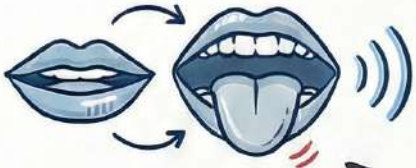
Speech vs. Language:
Understanding the Difference

SPEECH

The Physical Production of Sound



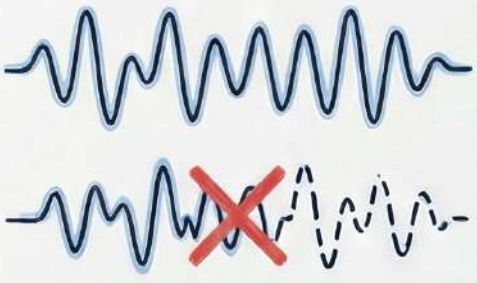
Articulation

The physical formation of speech sounds using the mouth, lips, and tongue.

Voice

The use of breath and vocal folds to produce sound, characterized by pitch and quality.

Fluency



The rhythm, rate, and smoothness of speech, free from interruptions like stuttering.

LANGUAGE

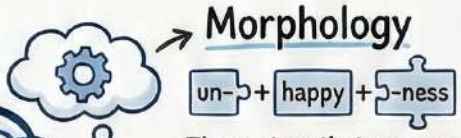
The Rule-Based System for Sharing Meaning

FORM (The Structure of Language)

Syntax

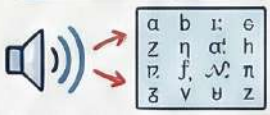
The system governing word order and the structure of sentences.

Morphology



The system that governs the structure of words and word forms (e.g., prefixes, suffixes).

Phonology



The sound system of a language and the rules that govern sound combinations.

CONTENT (The Meaning of Language)

Semantics

The system that governs the meanings of words and sentences (vocabulary).

USE (The Social Application of Language)

Pragmatics

The system of using language appropriately in social contexts (e.g., turn-taking).

Discourse

The combination of sentences to convey a larger message, like in a conversation or story.

Mapping Speech & Language in the Brain

The Brain's Language Network

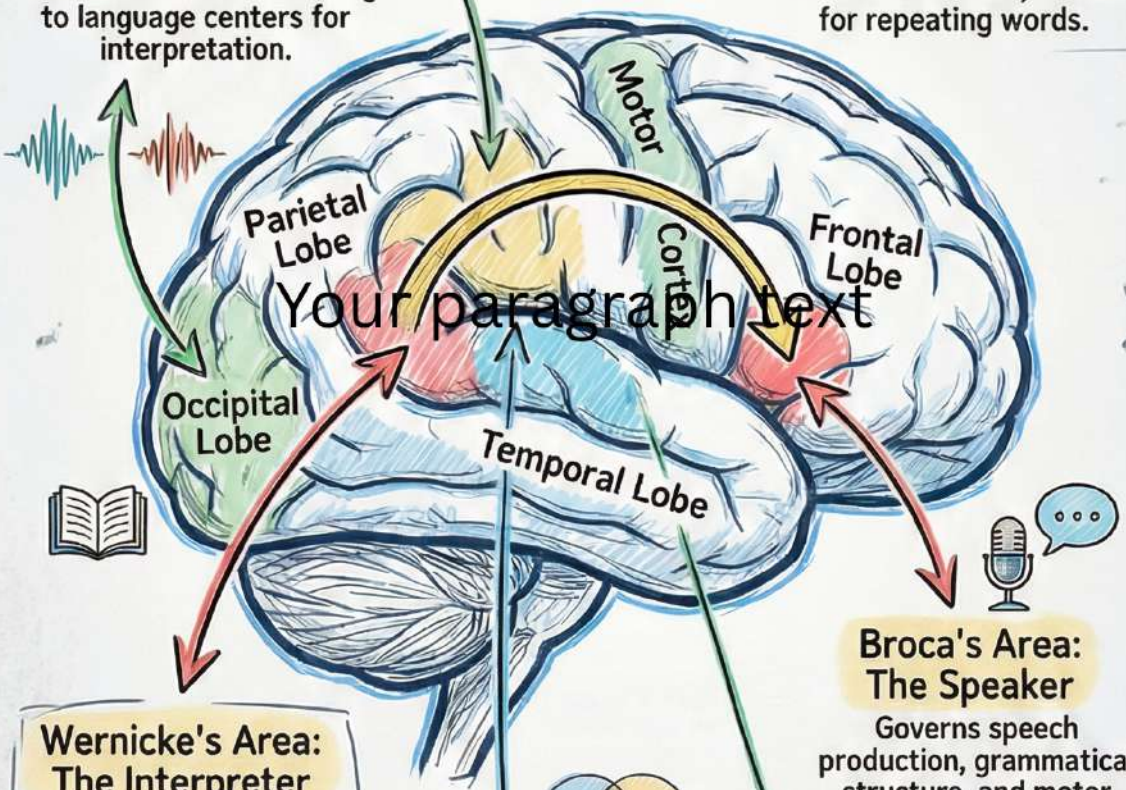
Our ability to communicate is not controlled by a single part of the brain but by a complex network of specialized areas. These regions work together to manage everything from the physical act of speaking to understanding and forming meaningful ideas.

Auditory & Visual Cortices: The Inputs

Process raw sounds and written text before sending to language centers for interpretation.

Arcuate Fasciculus: The Bridge

A neural pathway connecting Wernicke's and Broca's areas, crucial for repeating words.



Your paragraph text

Broca's Area: The Speaker

Governs speech production, grammatical structure, and motor control for articulation.

Wernicke's Area: The Interpreter

Responsible for language comprehension and understanding the meaning of words.

Angular Gyrus: The Integrator

Associates words with images, sensations, and ideas from different senses.

Supramarginal Gyrus: The Processor

Involved in phonological and articulatory processing of words we hear.

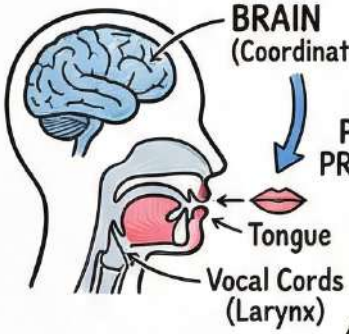
@Synapsekids

SPEECH DISORDERS vs. LANGUAGE DISORDERS

Speech disorders affect the physical act of talking.
Language disorders affect understanding and using communication rules. Distinct, but related.

SPEECH DISORDERS

The "How" of Talking



Difficulty with the physical production of sounds.

Affects the Mechanics of Speech

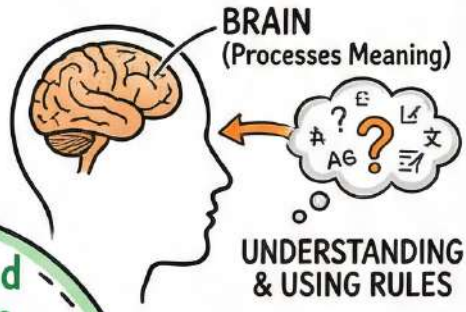
- **ARTICULATION:** Making Sounds (e.g., Lisping, Apraxia)
- **FLUENCY:** Rhythm/Stuttering
- **VOICE:** Pitch/Volume

Common Examples

- Stuttering, Lisping
- Apraxia (Brain can't coordinate speech muscles)
- Dysarthria (Slurred speech from muscle weakness)

LANGUAGE DISORDERS

The "What" of Talking



Difficulty understanding or using the rules of language.

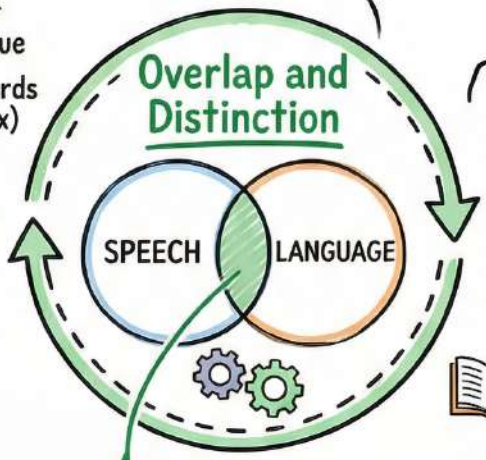
Affects the Meaning of Communication

- **VOCABULARY:** Semantics (Words/Meaning)
- **GRAMMAR:** Syntax (Sentence Structure)
- **SOCIAL USE:** Pragmatics (Context/Communication)

Common Examples

- Aphasia (Language loss after brain injury)
- Difficulty Following Directions
- Trouble Forming Sentences

Overlap and Distinction



DISTINCT but INTERCONNECTED: Can have one without the other, or they can co-occur.

CO-OCCURRENCE IS COMMON: E.g., A child with Autism may have both speech production and language comprehension challenges.