

Child Development: Brain Building

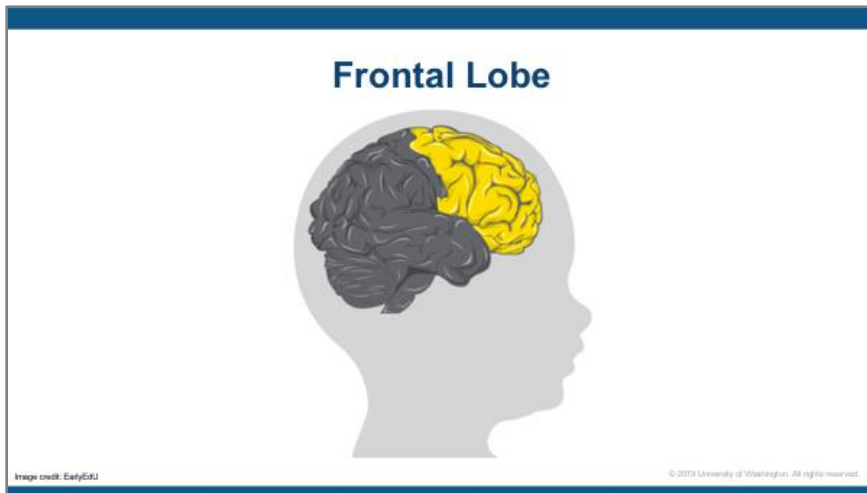
Activity: Brain Region Activity

Objective

To learn about regions of the brain that are active while children play and learn.

Instructions

Use in conjunction with Colors on the Piano video; discuss which region(s) of the brain might have been involved for the child and for the educator.



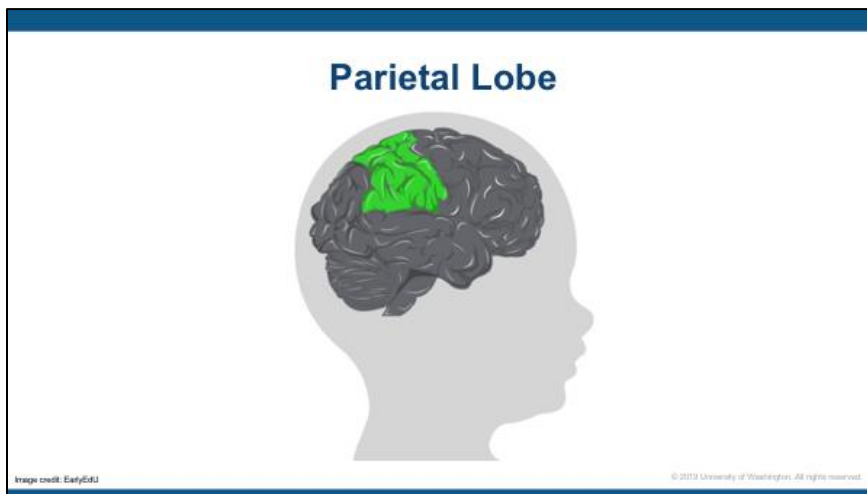
Frontal Lobe

Reasoning and planning

Ability to control emotions

Motor cortex - voluntary body and muscle movements

Broca's area - planning and forming words to speak.



Parietal Lobe

Sensory processing powerhouse

Taste, touch, temperature, and the sensation of pain

Every surface of the body is mapped onto a portion of the parietal lobe called the *somatosensory cortex*

Plays a role in linking sounds and images to memories

Occipital Lobe



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Occipital Lobe

Processes information about color, movement, and form

Allows you to associate what you see with objects and images that you are familiar with

Allows you to recognize and identify objects

Temporal Lobe



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Temporal Lobe

Different regions of the temporal lobe help you determine the frequency and volume of sounds

Wernicke's area - understand the meaning of the words you are hearing

Connected to the hippocampus, which plays an important role in memory

Help you form memories about what, when, and how things happen in your life

Cerebellum



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Cerebellum

Coordinating muscle movements

Contains about 80 percent of all neurons in the brain

Involved in anticipating rewards

May play a role in higher-level language, spatial processing, and working memory tasks