

# Brain Architecture

A metaphor for sensitive periods of development (early years and adolescence)



## The story you're telling:

The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood.



## Strategic way to redirect thinking away from patterns such as:

Black Box; Children are Containers – Fill 'em Up; Early Learning Goals = Morals, Manners, Basic Academics; Fatalism; Naturalism



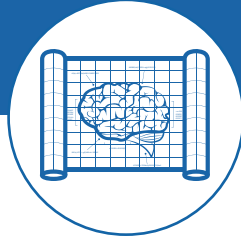
## Concepts and ideas included in this frame element:

- **Construction is orderly – we lay the foundation, frame the rooms, and wire the electrical system in a predictable sequence:** Similarly, advances in neuroscience have shown us that neurological development follows predictable stages, including rapid synapse formation at some periods, pruning of neural connections at others, and development of specific neural circuits at specific stages.
- **This construction project starts early...really early:** Science shows that brain development begins before birth. The first three years, including infancy, are an especially intense period of neurological development.
- **The strength of the foundation matters a lot:** Early experiences literally shape the brain, and establish either a sturdy or a fragile foundation for all of the development and behavior that follows.
- **Getting things right the first time matters:** Building a strong foundation in the early years increases the probability of positive outcomes. A weak foundation increases the odds of later difficulties.

*Continued on back.*

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## Concepts and ideas included in this frame element:

- **Construction is a process, not an event:** Development is an ongoing process that begins before birth and continues into adulthood.
- **In any building project, there are periods of intense activity:** While development is ongoing from infancy, childhood, adolescence, and into adulthood, there are two especially intense periods of brain development: the early years, and adolescence. In addition to these general sensitive periods, specific brain circuits have specific sensitive periods.
- **This construction project takes longer than we once thought:** We now know that some parts of the brain don't develop fully until early adulthood.
- **Construction problems can be corrected:** It's easier and more cost-effective to get things right the first time, but it is absolutely possible to correct issues later on.
- **This house has a complex floor plan:** A diverse set of skills and abilities are established in the early years – including emotional development. Emotional development is a biologically based aspect of human functioning. It is wired into young children's brains in response to their individual personal experiences and the influences of the environments in which they live.
- **Building is an active process:** Neurological development occurs through early experiences, through interaction with adults and sensory experiences with the environment; pivot to Serve and Return to explain this interaction in more detail.