

# BRAIN INSIGHTS

## MAKING CONNECTIONS

A child is born with over 100 billion neurons or brain cells. These neurons make connections with each other to make up the wiring of the brain. The brain physically grows as these connections are made. It is primarily experience that influences the creation of these connections.

## EARLY EXPERIENCES

The brain has to have experiences to develop. After eight months of experiences, an infant may already have 1,000 trillion connections created. Because the brain adapts to the environment it is exposed to, it will make connections based on either repeated negative experiences or repeated positive experiences.

## CREATING ABILITIES

The brain develops through a "use it or lose it" process: connections that are frequently used are retained. Other connections that are not repeatedly used will be pruned or eliminated so the active connections can become stronger. Abilities are developed through this process. Opportunities to play and explore with real objects is the way strong connections and abilities are developed best. Computer games and flashcards are not ideal ways to develop healthy brains. Physical activity, time spent outdoors, good nutrition, plenty of sleep, safe environments, regular routines, and predictable loving relationships all contribute to optimal brain growth.

## LEARNING LANGUAGE

Early adult-child interactions have a dramatic impact on brain development. Researchers have shown that when parents spoke to their infants often, children learned almost 300 more words by age two than did children whose parents rarely spoke to them. Exposure to language through television or DVDs does not provide benefits. Infants need to interact directly with others. Children need to hear people talk to them about what they are seeing and experiencing throughout the day for their brains to fully develop language skills.

## LOVING INTERACTIONS

Warm, responsive care meets an infant's basic needs. However, consistent care giving is not only comforting for an infant; it plays a *critical* role in healthy development. The way that parents and other caregivers respond to young children directly affects the base of later development. Loving relationships have a positive impact on social-emotional development and learning throughout life.



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Handout for [Head Start Body Start](#) webinar: *Play Every Day for a Healthy Brain!* (2011)