

## CONVERSATION GUIDE

### **The Effects of Early Experiences on Lifelong Learning and Health**

#### **Part 1: How to Build A Brain** (with Dr. Nicole Sherren, Palix Foundation)

*Understanding how children's brains develop has important implications for creating welcoming, caring, respectful and safe learning environments.*

#### **Key understandings**

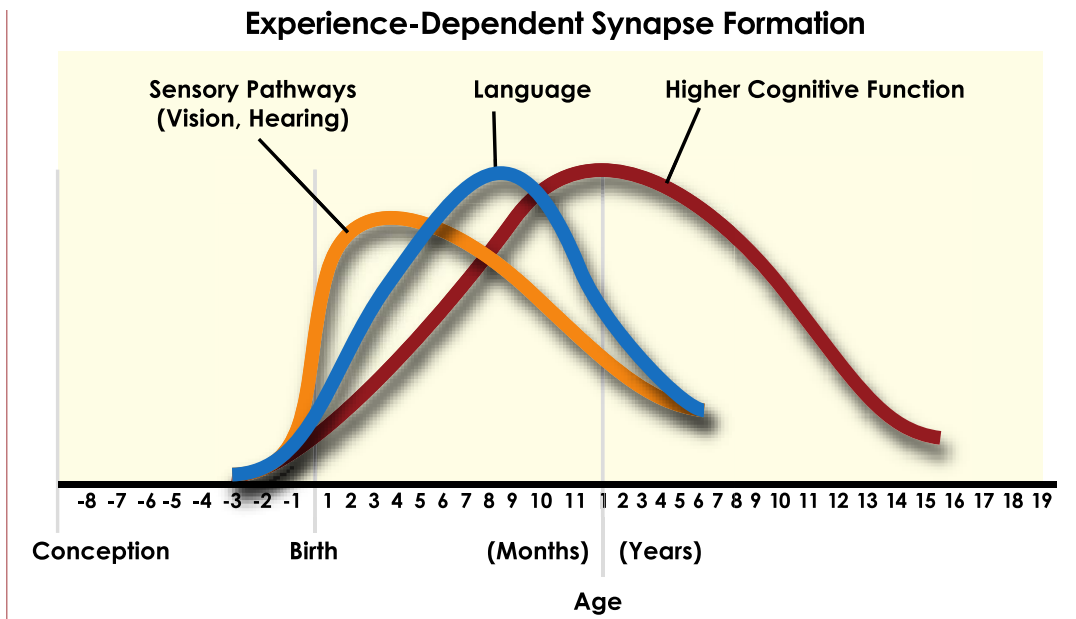
- Advances in science indicate that early experiences are built into our brains and our bodies and negatively or positively affect lifelong learning, behaviour and health outcomes.
- Building the architecture of the brain is like building a house; neural circuits governing basic skills and behaviours form first and provide a scaffold for more complex circuits and skills that develop over time. A strong foundation in the early years provides the sturdy support the brain needs to develop positive and stable mental health.
- Brain circuits are strengthened or weakened in a 'use it or lose it' fashion; the circuits that get used the most become very strong and remain in place, and those that are rarely used become weaker and get pruned away.
- Brains are built through back and forth social interactions between a child and a caring adult. These positive 'serve and return' interactions shape brain architecture and help build children's cognitive, social and emotional skills.
- Early cognitive and social-emotional learning lays the groundwork for an additional skill set called executive function, which allows us to plan, reason, focus and solve problems. Executive function is like an air traffic control system in a child's brain; it helps children navigate their world and succeed in life.
- When it comes to child development, experiences and environments count every bit as much as genes and can even influence how our genes are expressed. The environment's effect on gene expression can last a lifetime, and can even be passed on to subsequent generations.
- Whether a child has positive or negative life outcomes can be thought of like a scale that tips to one side or another. If we work together as a community to ensure that there are lots of positive experiences stacked on one side, and as few negative experiences as possible stacked on the other side, the child will have positive and healthy life outcomes.

#### **For more information**

- View the 4-minute video *How Brains Are Built: The Core Story of Brain Development* on the Alberta Family Wellness website:  
<http://www.albertafamilywellness.org/resources/video/how-brains-are-built-core-story-brain-development>

### Questions for reflection and discussion

- How would you describe your staff's current understanding of healthy brain development and what the implications of this are for the learning environment? How could this understanding be integrated into your school or jurisdiction's professional learning and instructional planning?
- What is already happening in your school or jurisdiction that supports healthy brain development? What are some examples of how schools are creating stimulating experiences and health-promoting environments?
- Are there current activities or practices in your school or jurisdiction that might not align with what we now know about supporting healthy brain development? If yes, how could these practices be modified to better support students?
- Consider the information displayed on the slide below. What are the implications of this information for junior and senior high schools?



Source: C.A. Nelson (2000)

- What school-wide approaches are currently being implemented in your school or jurisdiction that could be leveraged to better support healthy brain development?