

Training Module 2: *How Experiences Shape Brain Pathways*

Key Points:

- Children are born with virtually all of the brain cells they will ever have. What we mean by development is that connections are made between brain cells.
- Each area of the brain develops at a specific time and it's period of development is called the "plastic period". The plastic period for each brain area is determined genetically.
- How strong connections in a brain area will be is determined by how much the circuit is used during the plastic period.
- A strong circuit formed during the plastic period will be available for the rest of life. Circuits can still be formed later in life but they will not be as strong and building them will require many more repetitions than during the plastic period.

Summary of Lesson:

• Place pictures on the **Brain Pathways** poster and provide the following information:

- **Eyes:** visual circuits are plastic *prenatal period - 1 year*
 - **Child frowning:** circuits that form emotions and recognize emotions are plastic *prenatal period - 5 years*
 - **Child & mother talking:** communication circuits are plastic *prenatal period - 7 years*
 - **Child walking:** motor circuits are plastic *prenatal period - 5 years*
 - **Youth thinking:** circuits for reasoning and problem-solving are plastic *birth - 25 years*
- Use yarn to show circuits being built.
- **Blue yarn:** circuits for reading are built from birth until 7 years of age. Have your audience think of things they can do with children so that the child uses these circuits thousands of times.
 - **Red yarn:** children will build circuits for pathways that are used a lot during the plastic period. This is an example of a child growing up with an angry adult and learning to get out of the way.
 - **Orange yarn:** Brain circuits developing throughout adolescence, to about age 25, can modulate other areas and change behaviors.

