FOUNDATIONS

TRAUMA-INFORMED PROFESSIONAL LEARNING & DEVELOPMENT SERIES

NEUROSCIENCE FOR SAFE AND SUPPORTIVE CLASSROOMS

AUDIENCE

Beginning, All School Personnel

LENGTH

6 Hours

OVERVIEW

Part 3 of this series introduces educators to the core neuroscience behind how children learn, behave, and regulate in school. Through a mix of short videos, podcasts, readings, and guided discussions, participants learn how stress, trauma, and the nervous system shape student actions and engagement. The module offers practical, research-informed strategies—such as co-regulation, understanding the window of tolerance, and promoting felt safety—that help create calmer, more connected, and more supportive classrooms. By the end, school teams will share a common language about the brain and behavior and be equipped with actionable tools to integrate trauma-informed, neuroscience-aligned practices into daily routines.

LEARNING OBJECTIVES

- Define the following terms in the context of education: Neuroplasticity, the hand model, the window of tolerance, neuroception, and intentional plasticity.
- Identify the impact of stress and trauma on the nervous system, including differences between top-down and bottom-up behaviors.
- Develop practical classroom or school-wide plans to integrate neuroscience-aligned approaches into daily routines and interactions.

CONTENT

Discussion Video: Brain Basics
Discussion Video: Hand-Brain Model
Keynote Address, Dr. Lori Desautels
Discussion Video: Window of Tolerance, Pt 1 & 2

Infographics for Podcast Ep 80 - Exploring Our Polyvagal World
Infographic for Podcast Ep 90 - Brain Development Basics

Book Selection: An Exerpt from Trauma-Informed Teaching and IEPs
Blog Posts: Top-Down and Bottom-Up Behaviors; Brain Goggles for Challenging Behaviors

VOCABULARY

Neuroplasticity	Automatic Nervous System	Window of Tolerance	Top Down Behavior
Mylenation	Polyvagal	Intentional plasticity	Bottom Up Behavior
Neuroception	Hand Brain Model	Applied Educational Neuroscience Framework	
Vagus nerve	5 Brain Basics	Felt safety	

ACTIVITIES/ASSESSMENT

Our Common Language & Practice Map

Attachment & Trauma Network, Inc.

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