Welcome Webinar

Please introduce yourself in the chat box. Include your name, organization, and something interesting you learned recently.

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Leah Defenbaugh, STEM Outreach Manager, Twin Cities PBS

Welcome!

Today we will discuss the...

- Program Overview
- Training
- Curriculum Outline
- Welcome Event and Family Fiesta
- Family Guide and Activities
- Implementation Timeline
- Questions

Program Overview

What?

- National **English/Spanish** informal education project for Latinx middle school students, their families, and educators
- **Culturally responsive** programming and media resources about the brain's structure and function

Why?

- ***Empower*** STEM educators to provide hands-on activities about the brain's structure and function
- ***Increase knowledge*** of diverse neuroscience-related careers for youth to consider as exciting career paths
- ***Promote awareness*** about mental health and brain illnesses (Alzheimer's disease, depression, and epilepsy), and help-seeking behavior

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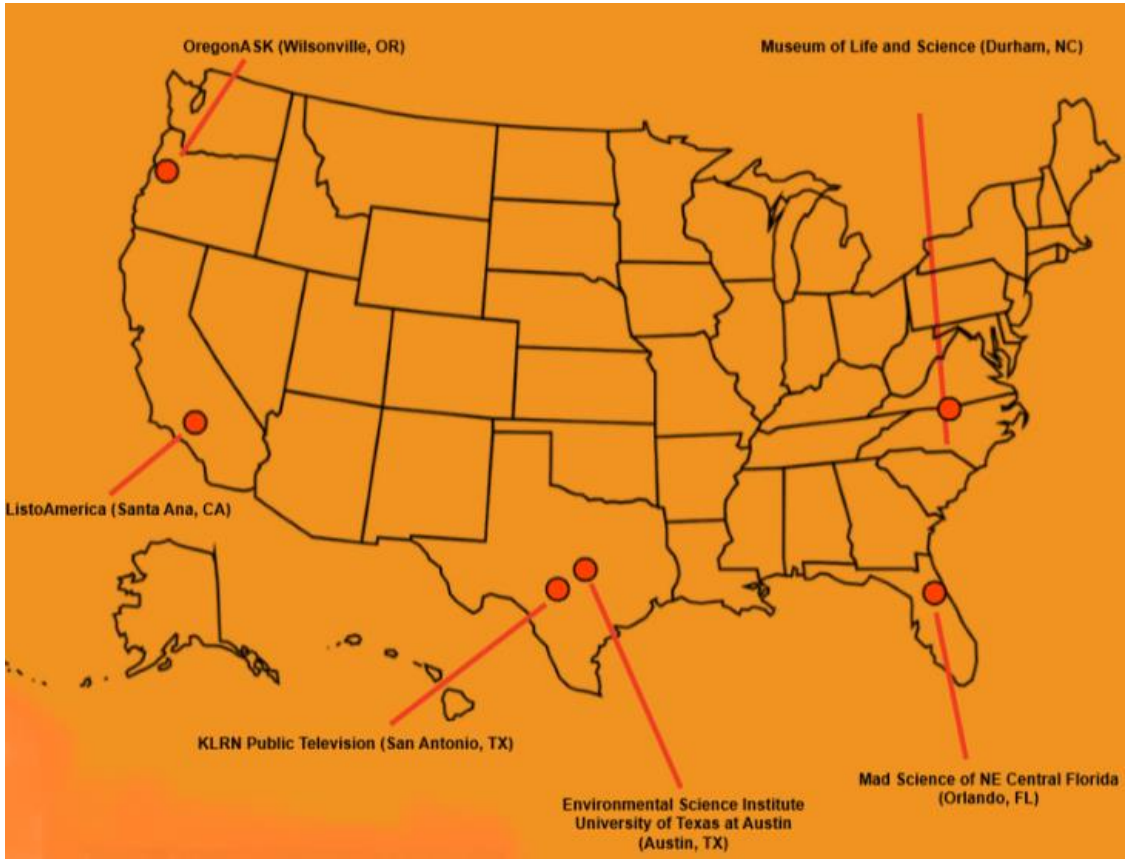
National Outreach Partners for 2019



- OregonASK – Wilsonville, OR
- ListoAmerica – Santa Ana, CA
- KLRN Public TV – San Antonio, TX
- Environmental Science Institute – U. of Texas at Austin – Austin, TX
- Mad Science of NE Central Florida – Orlando, FL
- Museum of Life and Science – Durham, NC

What do I have to do?

- *Recruit 10 Latinx youth aged 10 – 13*
- *Complete 6 hours of training*
- Hold a Welcome Night, program, and Family Fiesta
- Ensure the families receive the Family Guide
- Purchase materials and food (we will supply unique and expensive materials).
- Recruit in person role models for the Family Fiesta

What will TPT do for me?

- Give a stipend to help pay for the program
- Send educators' guides, family guides, and some program materials
- Upload all necessary materials to www.cerebroedu.org
- Create a cohort to discuss best practices, concerns, etc.
- Help recruit neuroscience role models (email Mollie: mlaidly@tpt.org)

Welcome Event

1. Families sit down to dinner and receive information about the program
2. Families receive their activity guides in Spanish, English, or both!
3. Families will have time to ask questions, look at the space, and more.

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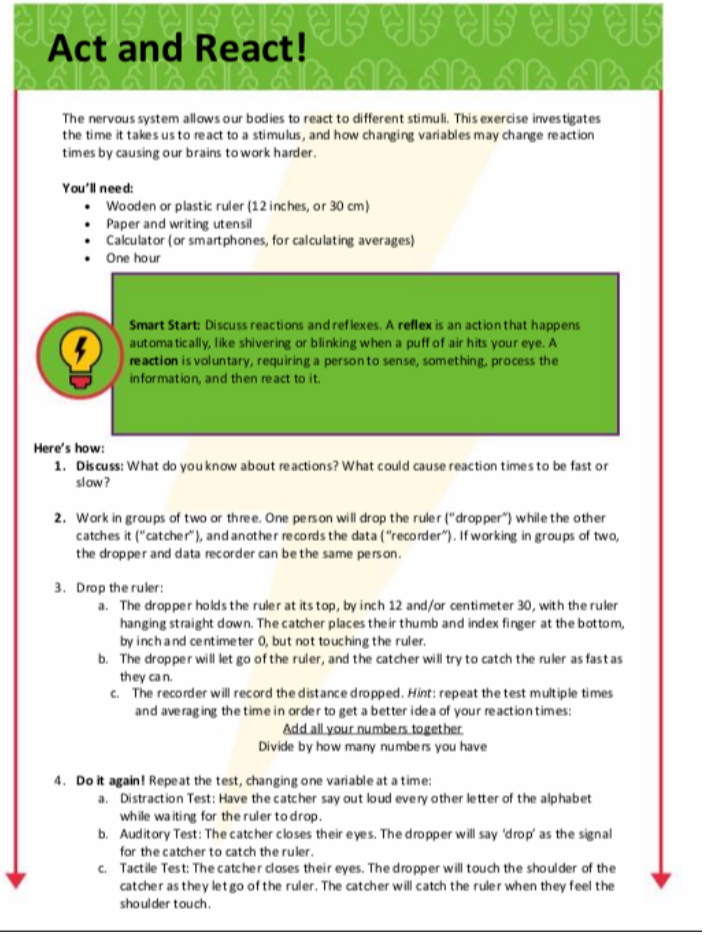
CEREBROedu Educator Guide

1. **Welcome –** how to discuss neuroscience with youth
2. **Curriculum –** hands-on and reflection activities
3. **Welcome event and Family Fiesta guides**
4. **In English** with supports for Spanish-speaking educators if needed



Act and React!

The nervous system allows our bodies to react to different stimuli. This exercise investigates the time it takes us to react to a stimulus, and how changing variables may change reaction times by causing our brains to work harder.

You'll need:

- Wooden or plastic ruler (12 inches, or 30 cm)
- Paper and writing utensil
- Calculator (or smartphones, for calculating averages)
- One hour

Smart Start: Discuss reactions and reflexes. A **reflex** is an action that happens automatically, like shivering or blinking when a puff of air hits your eye. A **reaction** is voluntary, requiring a person to sense, something, process the information, and then react to it.

Here's how:

1. **Discuss:** What do you know about reactions? What could cause reaction times to be fast or slow?
2. Work in groups of two or three. One person will drop the ruler ("dropper") while the other catches it ("catcher"), and another records the data ("recorder"). If working in groups of two, the dropper and data recorder can be the same person.
3. Drop the ruler:
   a. The dropper holds the ruler at its top, by inch 12 and/or centimeter 30, with the ruler hanging straight down. The catcher places their thumb and index finger at the bottom, by inch and centimeter 0, but not touching the ruler.
   b. The dropper will let go of the ruler, and the catcher will try to catch the ruler as fast as they can.
   c. The recorder will record the distance dropped. *Hint*: repeat the test multiple times and averaging the time in order to get a better idea of your reaction times:
      Add all your numbers together
      Divide by how many numbers you have
4. **Do it again!** Repeat the test, changing one variable at a time:
   a. Distraction Test: Have the catcher say out loud every other letter of the alphabet while waiting for the ruler to drop.
   b. Auditory Test: The catcher closes their eyes. The dropper will say 'drop' as the signal for the catcher to catch the ruler.
   c. Tactile Test: The catcher closes their eyes. The dropper will touch the shoulder of the catcher as they let go of the ruler. The catcher will catch the ruler when they feel the shoulder touch.

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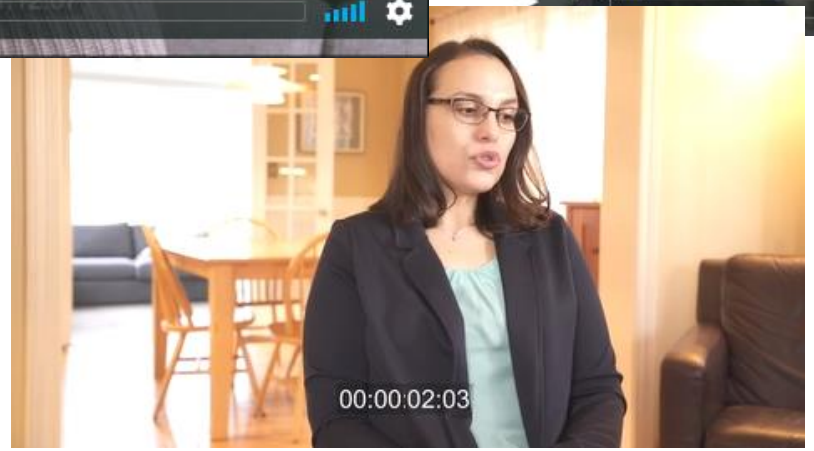
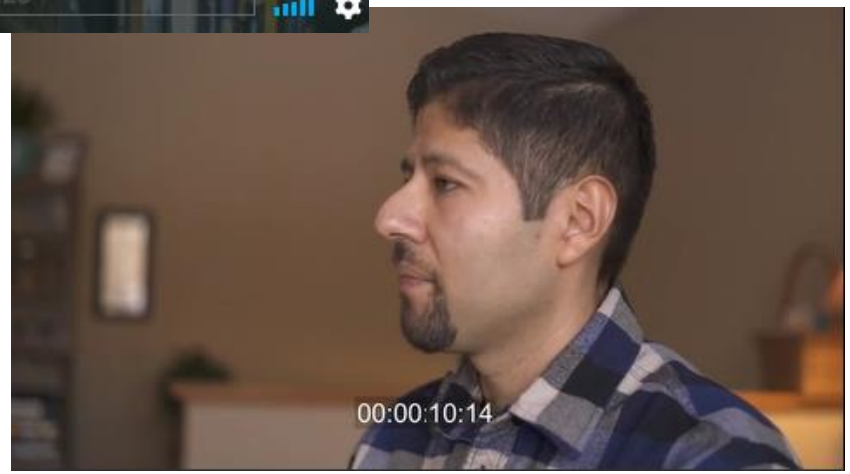
Role Model Videos





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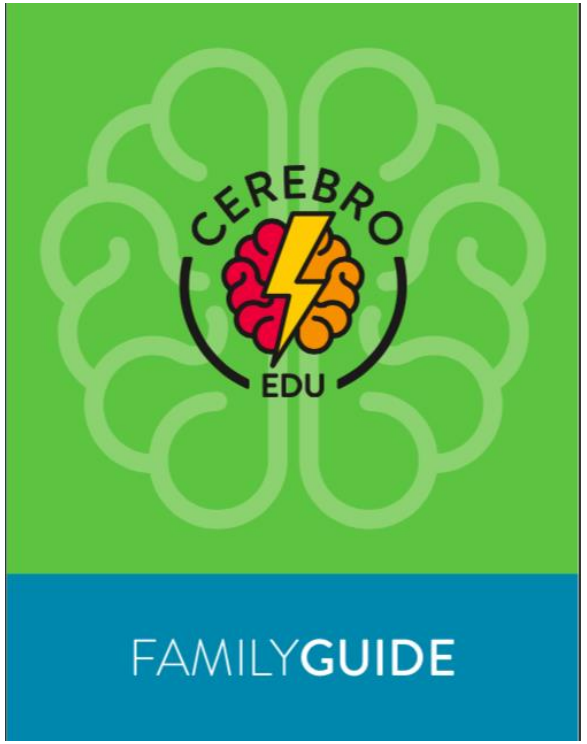
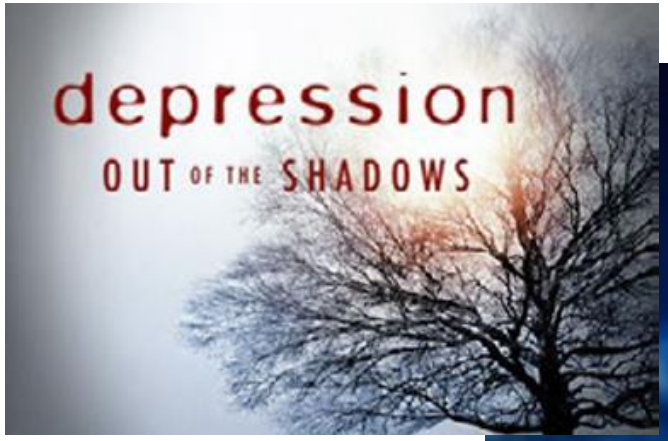
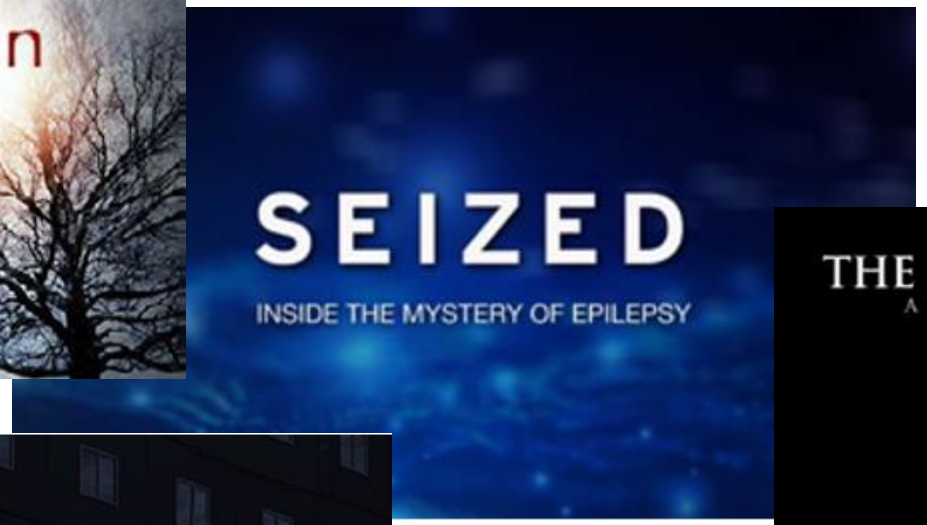
Family Guide

- An overview of the program
- Links or DVDs to TPT documentaries on mental health
- Discussion questions
- Hands-on activities for all ages
- In Spanish and English



Family Guide
Twin Cities PBS Documentaries





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Family Fiesta

1. Families sit down to dinner and discuss the program.
2. Families will hear from at least one in person role model.
3. Families will participate in hands-on activities.
4. Families will complete program evaluations.
5. Families will connect with local mental health resources.

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Training

- Two one-hour webinars:
  - Congrats! You've already completed one!
  - May 6 we will learn about best practices engaging Latinx families and evaluation

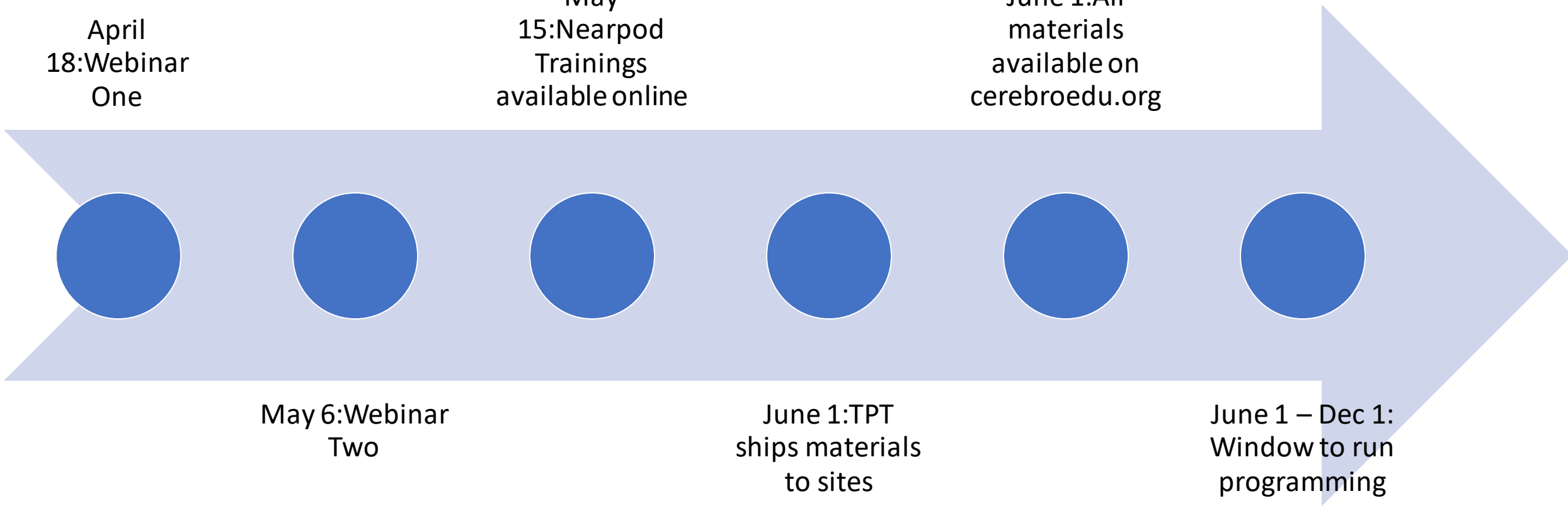
- Four hours of online training, available after May 15:
  - Nearpod is a platform for interactive online trainings
  - You can complete the trainings any time before your program begins

Activities & Training

- The classroom activities and the online training are divided into 4 modules:
  - Brain Structure [example: sheep brain dissection]
  - Brain Connections [example: reaction time]
  - Brain in Action [example: EMG]
  - Brain Activity linked to Behavior [example: memory]

  - All activities are appropriate for out of school time programs.

Timeline


April 18:Webinar One
May 6:Webinar Two
May 15:Nearpod Trainings available online
June 1:TPT ships materials to sites
June 1:All materials available on cerebroedu.org
June 1 – Dec 1: Window to run programming

Questions?

Next Webinar: Monday, May 6 at 3:00 PM CDT