15-Minute In-Service Suites

STEAM AIAN

Science A

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Every Individual is Rooted in Culture

STEAM Stretches Across the ELOF Domains

	CENTRAL DOMAINS				
	APPROACHES TO LEARNING	**SOCIAL AND EMOTIONAL DEVELOPMENT**	**LANGUAGE AND LITERACY**	**COGNITION**	**PERCEPTUAL, MOTOR, AND PHYSICAL DEVELOPMENT**
▲ INFANT/ TODDLER DOMAINS	Approaches to Learning	Social and Emotional Development	Language and Communication	Cognition	Perceptual, Motor, and Physical Development
● PRESCHOOLER DOMAINS	Approaches to Learning	Social and Emotional Development	Language and Communication / Literacy	Mathematics Development / Scientific Reasoning	Perceptual, Motor, and Physical Development

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STEAM Stretches Across the ELOF Domains

- Cognition (Infant/Toddler)
  - Exploration and Discovery
  - Memory
  - Reasoning and Problem-Solving
- Cognition (Preschooler)
  - Mathematics Development
  - Scientific Reasoning
- Approaches to Learning
- Social and Emotional Development
- Language and Communication
- Perceptual Motor and Physical Development

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Red Cliff Early Childhood Center

We were always trying to integrate culture into the curriculum—the science domain, the math domain, etc. Then we realized that culture should be at the base, serving as the foundation, the building block for curriculum development. It was an amazing paradigm shift! We are now making huge gains in integrating language and culture into our early childhood programming.

—The Red Cliff Early Childhood Center

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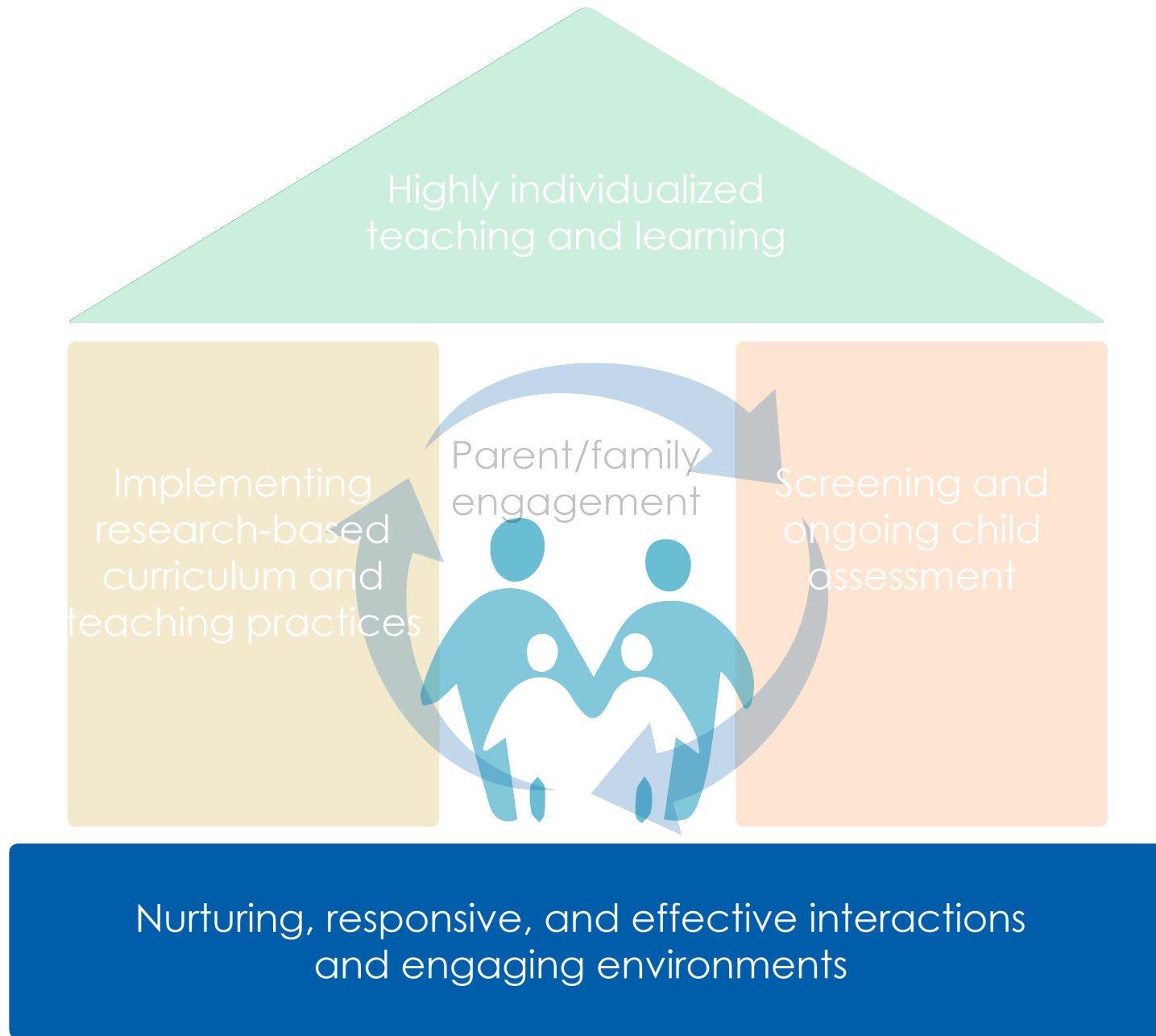
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Parent, Family, and Community Engagement

Culturally and linguistically responsive environments can only be created by engaging and partnering with families, Elders, and the community. Establishing a partnership with families and the community is crucial for children's learning and later success in life.

Highly individualized teaching and learning

Implementing research-based curriculum and teaching practices

Parent/family engagement

Screening and ongoing child assessment

Nurturing, responsive, and effective interactions and engaging environments

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Objectives

- **Identify** ways infants, toddlers, and preschoolers naturally engage in inquiry, reasoning, and problem solving through everyday routines, culture, language, and learning opportunities

- **Describe** how the STEAM components share a common approach and focus

- **Provide strategies** to support children's inquiry and STEAM skills in the early education setting, community, and at home

- **Learn** to use the *Steps and Introduction to Making it Work Guide* to integrate culture and language in lesson plans for STEAM skills

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Culturally and Linguistic Responsive Practices

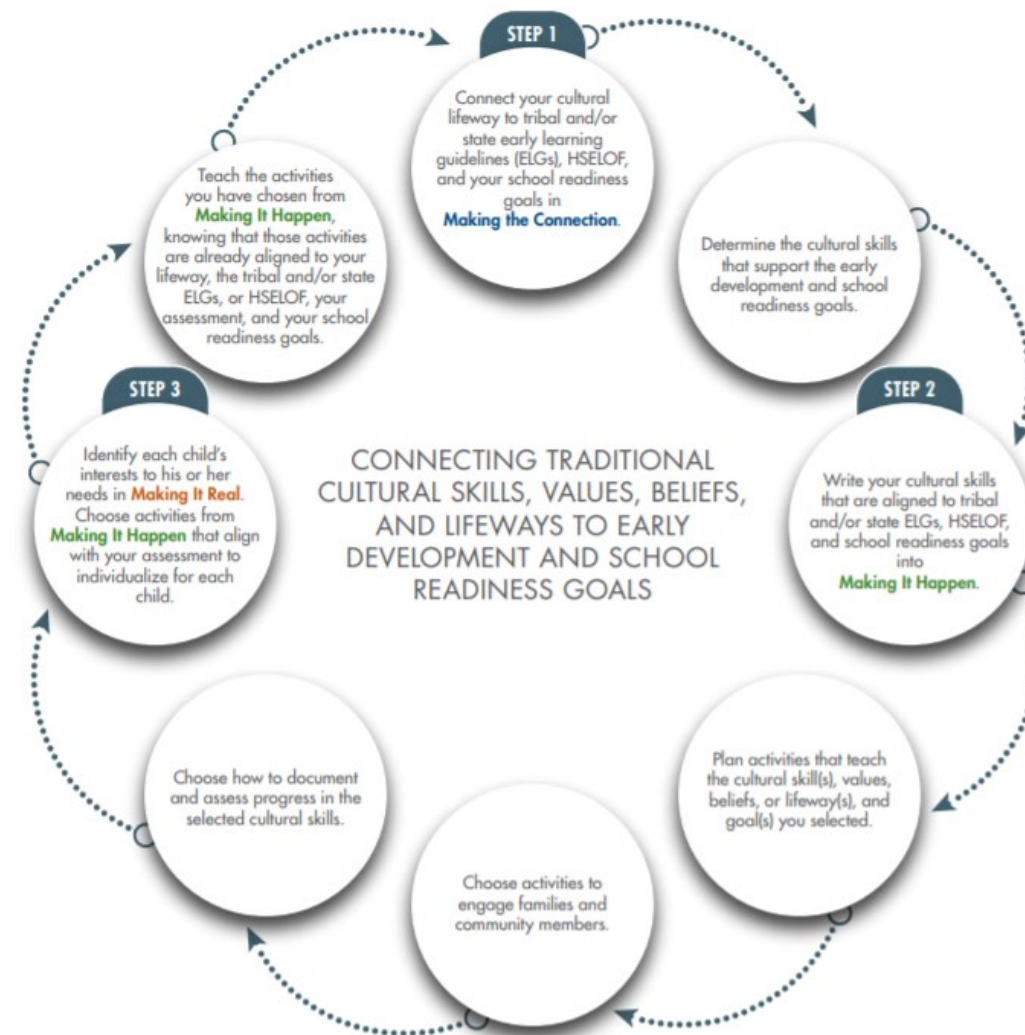**Sources of Developmentally Appropriate Practices**
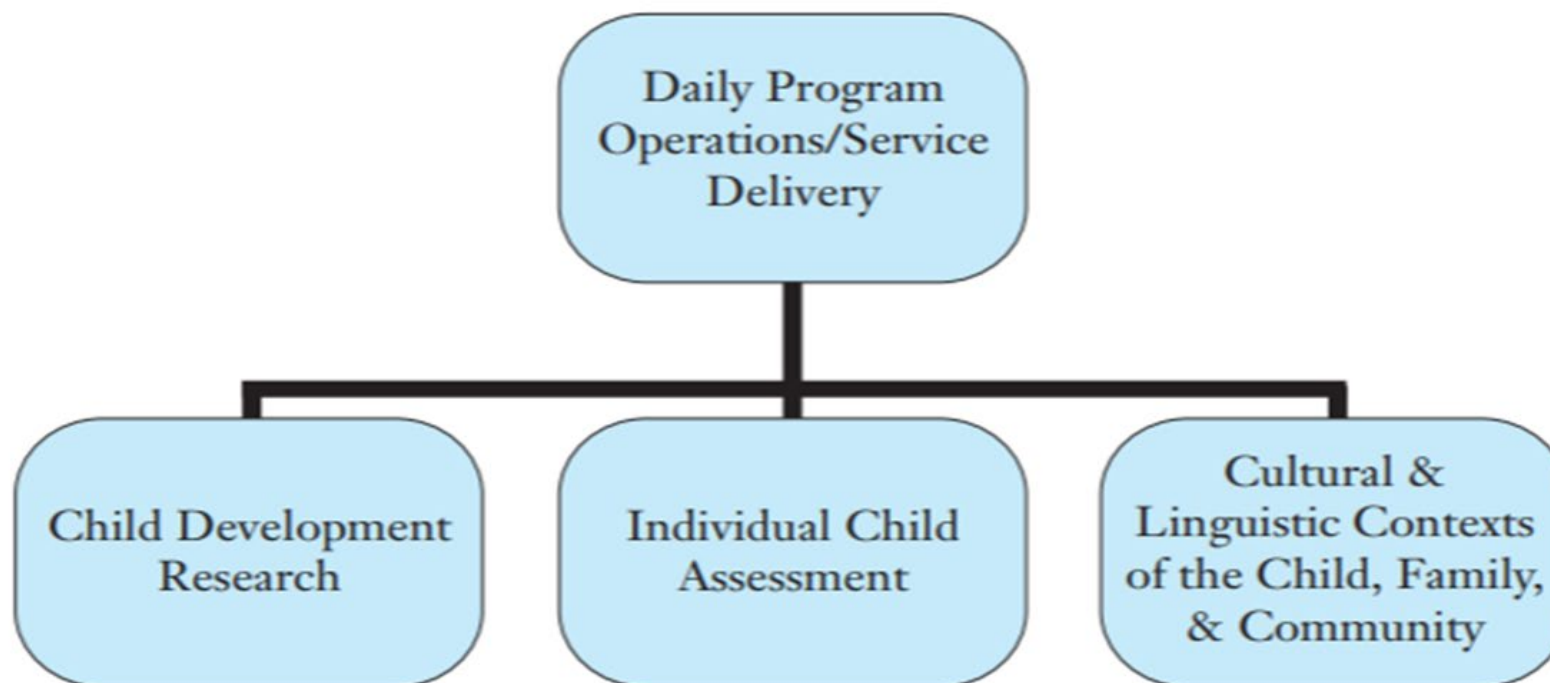
Making It Work

Without language, the canoe, paddle, water, seat, the birds you hear are different than what our ancestors experienced. If you know the language, then you know what our ancestors heard, saw, felt, and experienced.
—Zalmai "Zeke" Zahir, University of Oregon

The **Making It Work** Cycle

STEP 1
Connect your cultural lifeway to tribal and/or state early learning guidelines (ELGs), HSELOF, and your school readiness goals in **Making the Connection**.

Determine the cultural skills that support the early development and school readiness goals.

STEP 2
Write your cultural skills that are aligned to tribal and/or state ELGs, HSELOF, and school readiness goals into **Making It Happen**.

Plan activities that teach the cultural skill(s), values, beliefs, or lifeway(s), and goal(s) you selected.

Choose activities to engage families and community members.

Choose how to document and assess progress in the selected cultural skills.

STEP 3
Identify each child's interests to his or her needs in **Making It Real**. Choose activities from **Making It Happen** that align with your assessment to individualize for each child.

Teach the activities you have chosen from **Making It Happen**, knowing that those activities are already aligned to your lifeway, the tribal and/or state ELGs, or HSELOF, your assessment, and your school readiness goals.

CONNECTING TRADITIONAL CULTURAL SKILLS, VALUES, BELIEFS, AND LIFEWAYS TO EARLY DEVELOPMENT AND SCHOOL READINESS GOALS

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What is STEAM?

Science Technology Engineering Art Math

STEAM is for Everyone

STEAM is about *how* people explore the world, not which facts they know.

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STEAM is All Around

A Common Approach and Focus

STEAM Mindset

STEAM Knowledge

Language of STEAM

STEAM-Related Skills

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STEAM Mindset

Hoop Dancers from Red Cliff Bank of Lake Superior Chippewa

There is a group of teenage Hoop Dancers from the Red Cliff Band of Lake Superior Chippewa who are "stepping out" as young leaders in their community—and it all started when they were very young! In their homes and at Head Start, the girls learned the importance of their family, community, and culture. They developed social relationships while participating in the traditional, cultural music, dance, and art of their community. They learned to share, discuss, and compromise, as they developed confidence and expressed pride in their accomplishments and their culture.

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STEAM Knowledge

Language of STEAM

Two-Eyed Seeing

"Two-Eyed Seeing asks us to see our strengths, the best in our ways of knowing, while also asking us to respect and celebrate our differences. Two-Eyed Seeing acknowledges the necessity of formal structure yet that it must be preamble to and receptive of new understandings and opportunities, i.e., understandings associated with 'Spirit of the East' which brings the 'gift of newness, of transformation.'"

Speak The Language Of STEAM

- Observe, observation
- Question
- Predict, prediction
- Similar, different
- Compare, contrast

- Measure
- Count
- Investigate
- Explore
- Experiment

- Test
- Discover
- Record
- Explain
- Hypothesize, hypothesis, guess

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STEAM-Related Skills

How We Can Support STEAM Learning

Engaging Environments

Nurturing, Responsive, & Effective Interactions

Learning Experiences/Activities

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Engaging Environments

Provide open-ended materials

Use a variety of materials

Pay attention to children's interests

Engage the senses

Consider children's developmental levels

Arrange materials so they are accessible

Nurturing, Responsive, & Effective Interactions

Learning Experiences/Activities

Learning Activity: STEAM in Everyday Experiences & Activities

Review

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