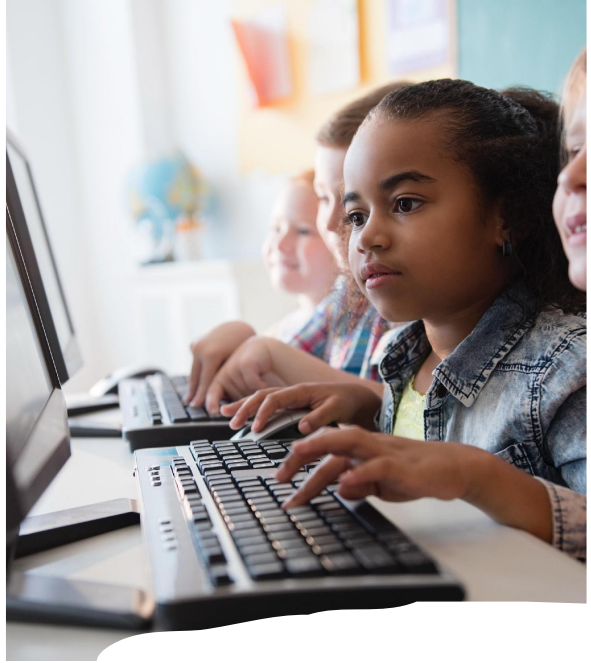


SIP Supporting Inclusive Practices

# Multiplying Universal Access to Play-Based Early Math Curriculum

The Early Math Project
Fall Forum
Oct. 5th, 2023

www.sipinclusion.org
Facebook/Instagram/Twitter: @sipinclusion

*Funded by the California Department of Education, Special Education Division*

# Today's Presenters

**Heather Snipes**
Program Support Specialist
El Dorado County Office of Ed.
Supporting Inclusive Practices (SIP)

**Kevin Schaefer**
Director
El Dorado County Office of Ed.
Supporting Inclusive Practices (SIP)

# Our Mission & Vision

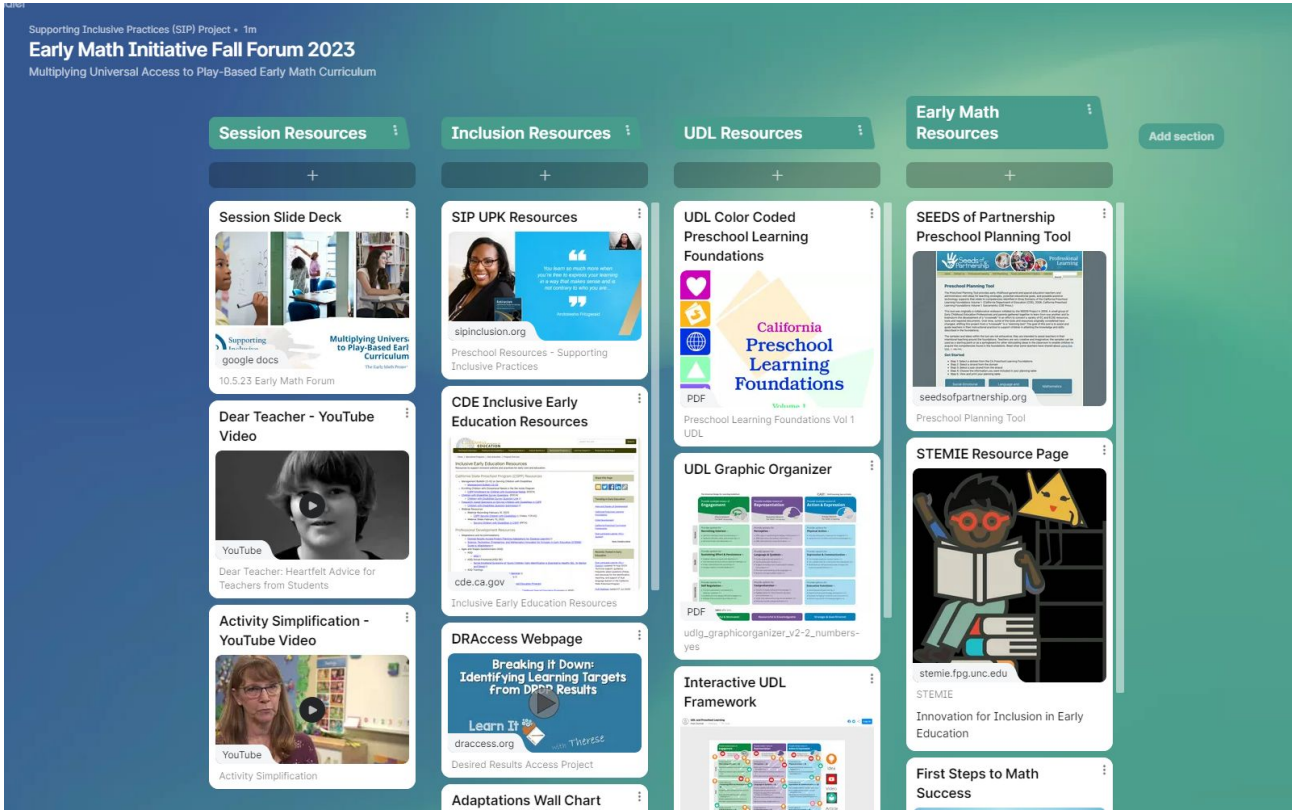
Our mission is to provide tiered, technical assistance to support local education agencies (LEAs) focused on building, implementing, sustaining, monitoring, and scaling up evidence-based practices within intentionally designed, equitable, and inclusive educational systems to increase inclusion of students with disabilities in general education settings.

Innovate. Include. Impact



*Funded by the California Department of Education, Special Education Division*

# Session Padlet




https://padlet.com/SIP_Grant/early-math-initiative-fall-forum-2023-wemln8l2a5m78jb5

# EQUITY AND INCLUSION FROM THE START

# BENEFITS OF INCLUSIVE EDUCATION IN EARLY CHILDHOOD

"Several fields of study (e.g., developmental science, neuroscience, molecular biology, and genomics) point to the fact that ***children develop at a young age the skills, behaviors, and dispositions that are foundational as they transition to later learning***"

More opportunities to develop ***social and play skills***

Increased ***developmental gains*** for preschool children

***Peer acceptance*** and the development of friendships among children

***Increased language development*** for children with significant disabilities

***Improved attitudes*** about children with disabilities

# SHIFTING MINDSETS

Students with disabilities are ***general education students first*** and foremost

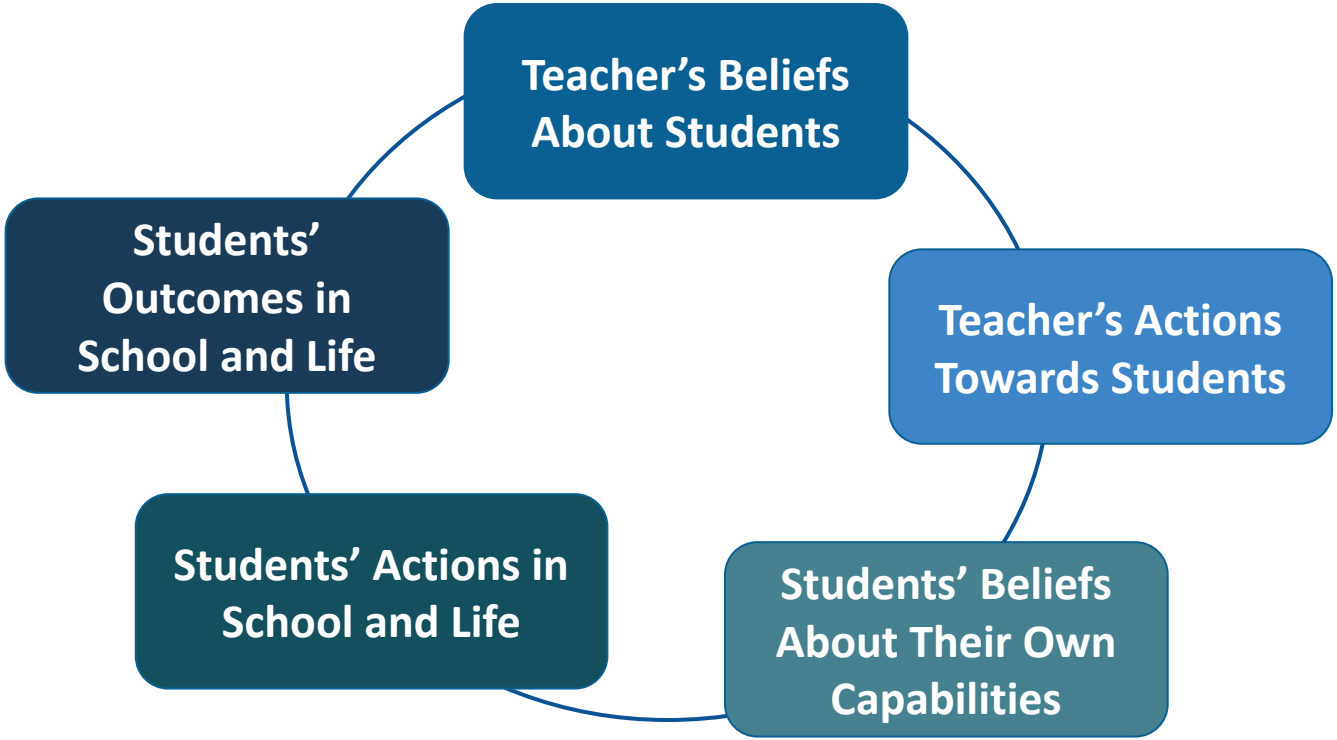
***Special education is not a place***, but services and supports delivered in a particular setting

Asking, "Do our programs and decision-making align with post-secondary options for students with disabilities?"

Special education law states ***students should be learning with their peers*** to the greatest extent possible

***Presumptions and generalities regarding disabilities create a life-long lasting barrier***

# Belief Impact Cycle




https://prezi.com/yq4g0vah_uz6/teacher-expectancy-effect/

# LANGUAGE MATTERS

| From that... | To this.... |
| --- | --- |
| Stubborn | Persistent |
| Fussy | Selective |
| Loud | Expressive |
| Bossy | A Leader |
| Wild | Energetic |

**What can you add to your positive reframing word bank?**

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# “See a child differently, you see a different child”

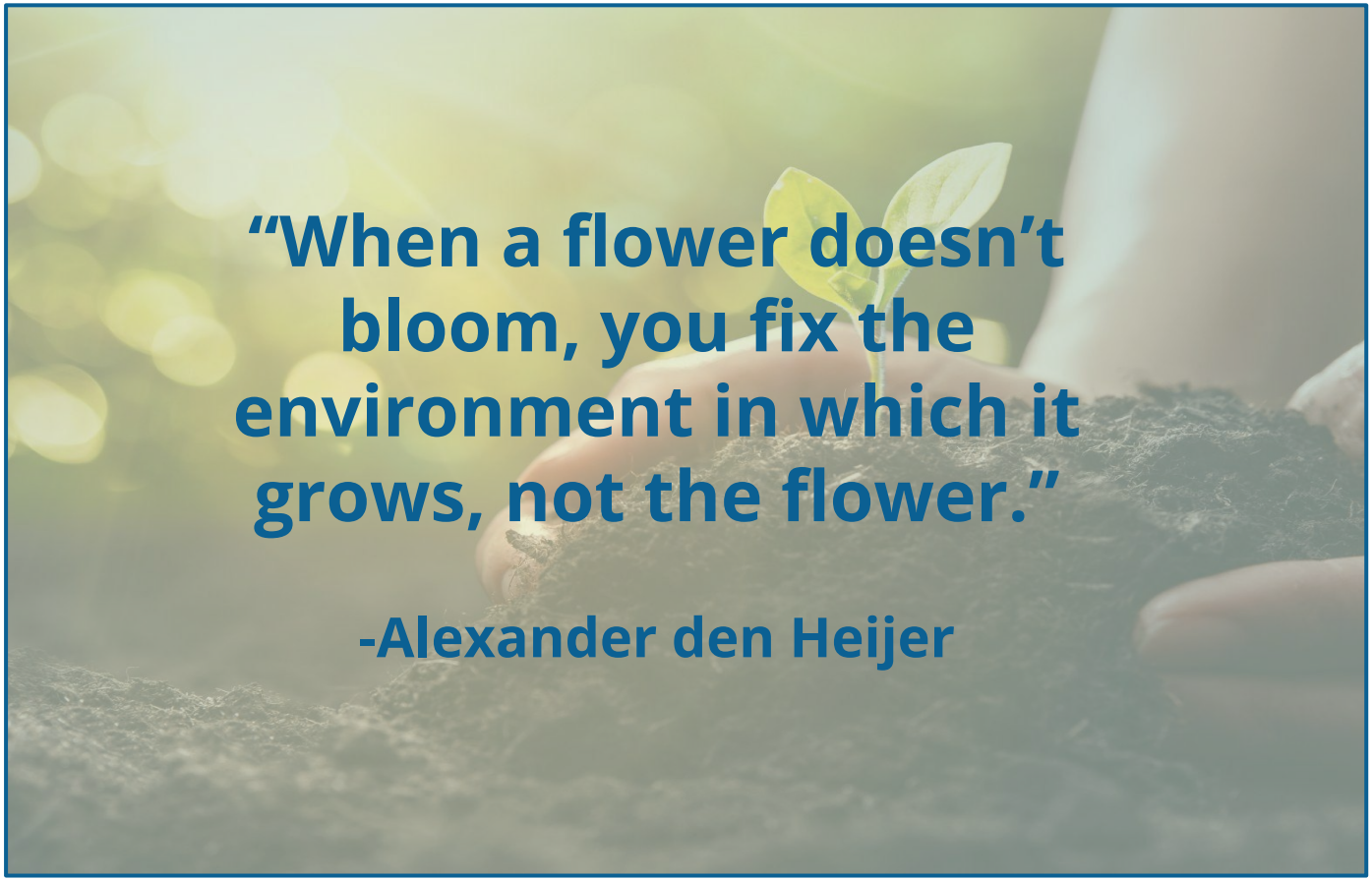
-Dr. Stuart Shanker

# LEARNER VARIABILITY

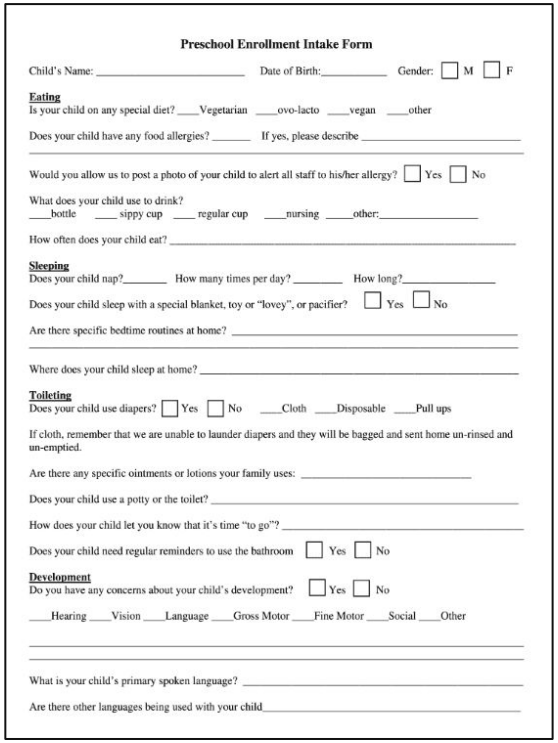
# Dear Teacher...

https://www.youtubeeducation.com/watch?v=lTMLzXzgB_s

# Context Matters!



# Identifying Learner Variability

**Preschool Enrollment Intake Form**

Child's Name: _____ Date of Birth:_____ Gender: ☐ M ☐ F

**Eating**
Is your child on any special diet? ___Vegetarian ___ovo-lacto ___vegan ___other

Does your child have any food allergies? _____ If yes, please describe _____

Would you allow us to post a photo of your child to alert all staff to his/her allergy? ☐ Yes ☐ No

What does your child use to drink?
___bottle ___ sippy cup ___ regular cup ___nursing ____other:_____

How often does your child eat? _____

**Sleeping**
Does your child nap?_____ How many times per day? _____ How long?_____

Does your child sleep with a special blanket, toy or "lovey", or pacifier? ☐ Yes ☐ No

Are there specific bedtime routines at home? _____

Where does your child sleep at home? _____

**Toileting**
Does your child use diapers? ☐ Yes ☐ No ___Cloth ___Disposable ___Pull ups

If cloth, remember that we are unable to launder diapers and they will be bagged and sent home un-rinsed and un-emptied.

Are there any specific ointments or lotions your family uses: _____

Does your child use a potty or the toilet? _____

How does your child let you know that it's time "to go"? _____

Does your child need regular reminders to use the bathroom ☐ Yes ☐ No

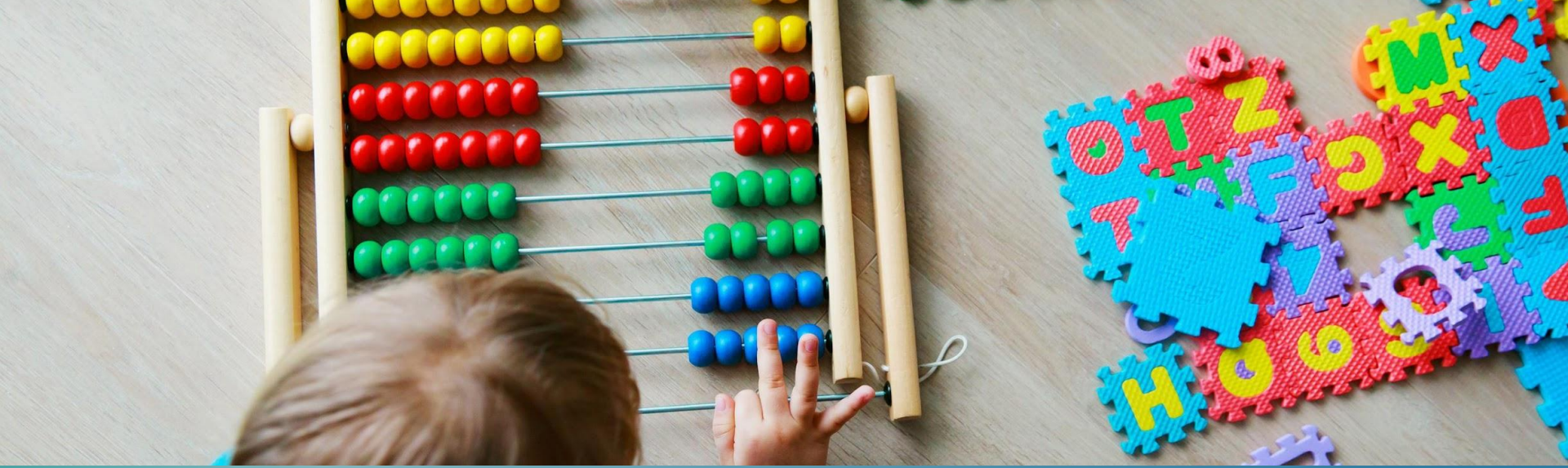
**Development**
Do you have any concerns about your child's development? ☐ Yes ☐ No

___Hearing ___Vision ___Language ___Gross Motor ___Fine Motor ___Social ___Other

What is your child's primary spoken language? _____

Are there other languages being used with your child_____

Gathering information about students using multiple sources allows you to begin planning for Learner Variability before they even step foot in your classroom!



# UNIVERSAL DESIGN FOR LEARNING

# Removing Barriers

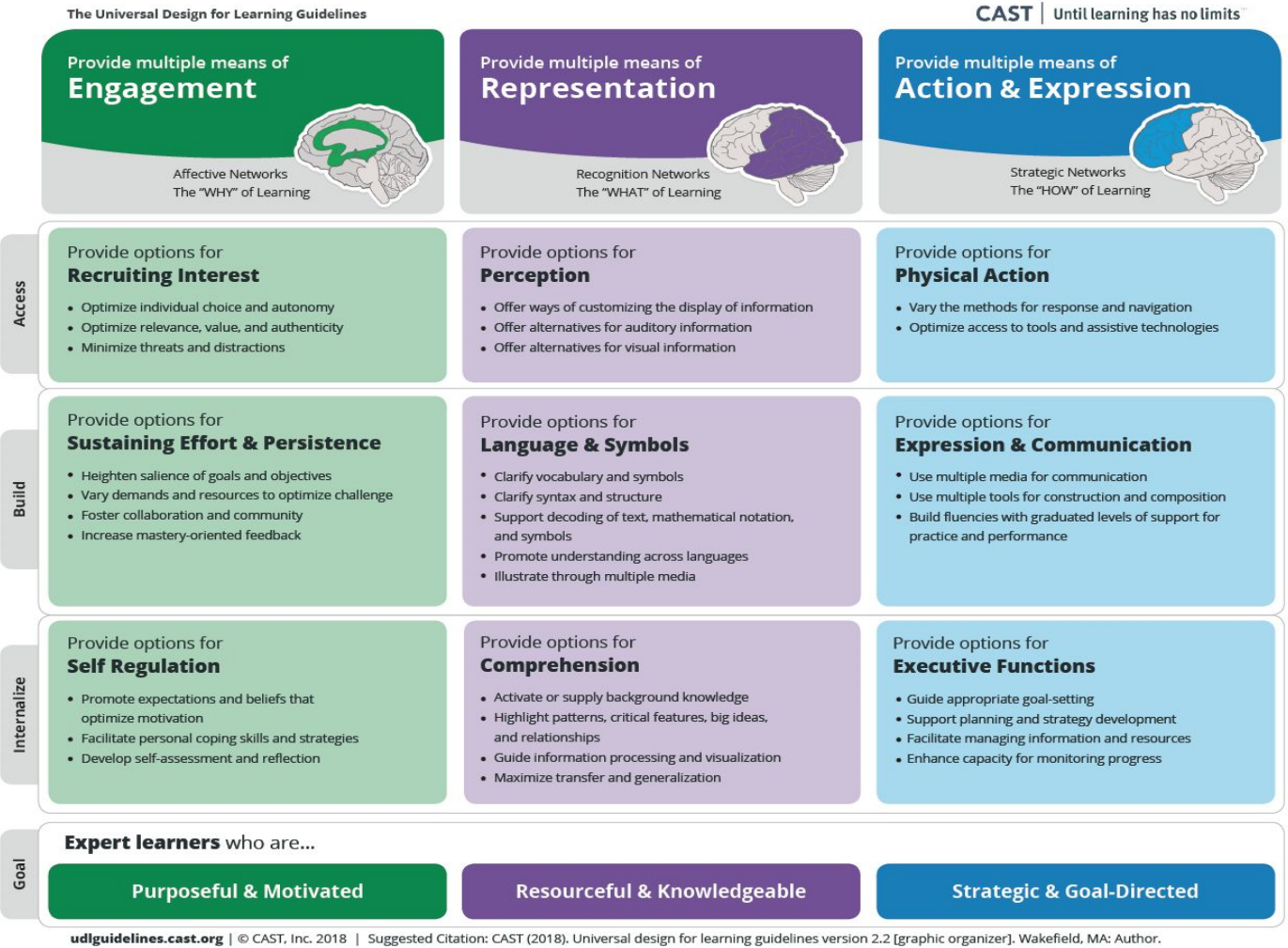

UDL is a proactive design of lesson and activity planning to ensure they are educationally accessible regardless of learning style, physical and sensory abilities.

# Setting the Stage by Dispelling UDL Myths

**UDL is NOT.....**

- a curriculum or toolbox - it is a mindset for equity and access.
- specific to students with disabilities, but is for ALL learners.
- the same as differentiated instruction.
- centered on technology.

**UDL transforms the power structure in education to students.**




http://udlguidelines.cast.org

# The Goal of Universal Design for Learning

Goal

**Expert learners** who are...

| Purposeful & Motivated | Resourceful & Knowledgeable | Strategic & Goal-Directed |
|---|---|---|

## In Early Childhood...

Goal

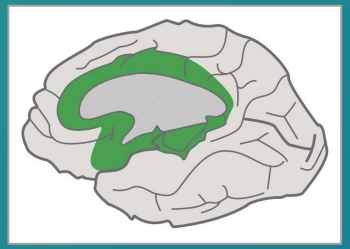
| | | |
|---|---|---|
| Accesses and engages in all learning opportunities | Learns according to their individual strengths and interests | Demonstrates learning in ways that reflect their individual strengths |

## and Beyond...

Goal

| | | |
|---|---|---|
| Knows how to set challenging learning goals and sustain effort and resilience that reaching those goals require<br><br>Monitors and regulates emotional reactions that would be impediments or distractions to successful learning | Makes connections to prior learning experiences<br><br>Activates that prior knowledge to identify, organize, prioritize and assimilate new information<br><br>Knows how to transform new information into meaningful and usable knowledge | Formulates plans for learning<br><br>Organizes resources and tools to facilitate learning<br><br>Monitors their progress<br><br>Abandons plans and strategies that are ineffective |

## Affective Networks (The Limbic System)

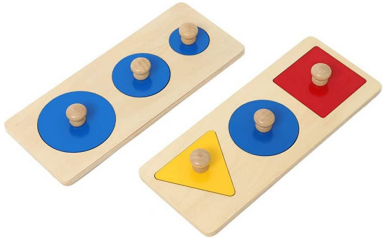


**Processing**

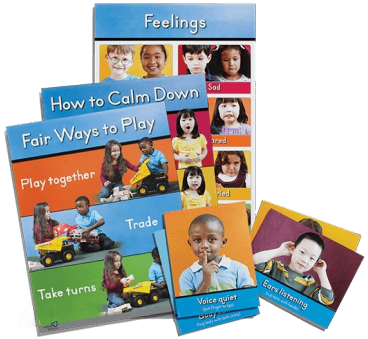
**Regulation**

**Fight, Flight, Freeze**


**Highly Preferred Items**



**Materials With Varying Levels of Difficulty**




**Feelings Charts**
**Expectations & Solutions Cards**

## Recognition Networks (Temporal Lobe)

**Perception**

**Recognition**

**Memory**

**Emotions**

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Provide multiple means of
**Representation**

Recognition Networks
The "WHAT" of learning

Provide options for
**Perception** (1)

- Offer ways of customizing the display of information (1.1)
- Offer alternatives for auditory information (1.2)
- Offer alternatives for visual information (1.3)

Provide options for
**Language & Symbols** (2)

- Clarify vocabulary and symbols (2.1)
- Clarify syntax and structure (2.2)
- Support decoding of text, mathematical notation, and symbols (2.3)
- Promote understanding across languages (2.4)
- Illustrate through multiple media (2.5)

Provide options for
**Comprehension** (3)

- Activate or supply background knowledge (3.1)
- Highlight patterns, critical features, big ideas, and relationships (3.2)
- Guide information processing and visualization (3.3)
- Maximize transfer and generalization (3.4)

**Big Books & Listening Stations**


**Visual/Auditory Transition Cues**

**Activities to Support Pre-Academic Math and Literacy Skills**

## Strategic Networks (Frontal Lobes)

**“Higher” Cognitive Functions**

**Decision-making**

**Planning**

**Problem-solving**

SIP

Provide multiple means of
**Action & Expression**

Strategic Networks
The "HOW" of learning

Provide options for
**Physical Action** (4)

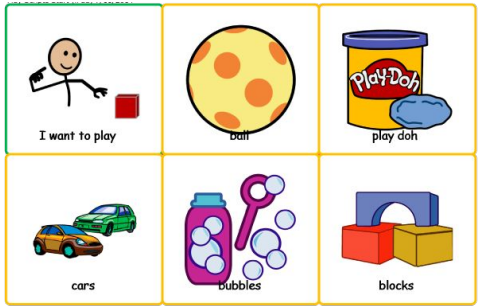
- Vary the methods for response and navigation (4.1)
- Optimize access to tools and assistive technologies (4.2)

Provide options for
**Expression & Communication** (5)

- Use multiple media for communication (5.1)
- Use multiple tools for construction and composition (5.2)
- Build fluencies with graduated levels of support for practice and performance (5.3)

Provide options for
**Executive Functions** (6)

- Guide appropriate goal-setting (6.1)
- Support planning and strategy development (6.2)
- Facilitate managing information and resources (6.3)
- Enhance capacity for monitoring progress (6.4)

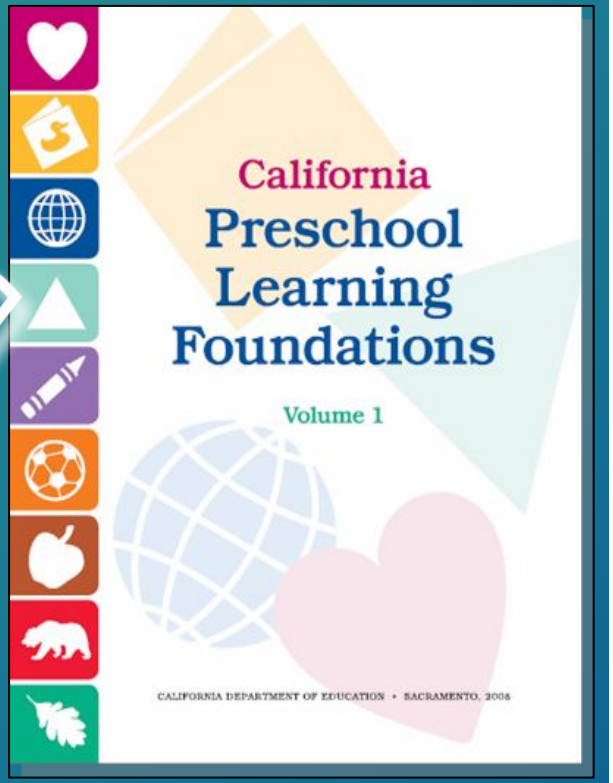



**Menu of Options**

**Communicating knowledge by “showing”**

**Scaffolding**

## Resource Highlight:




Foundations of Mathematics: PLF Volume 1

SIP

# The Preschool Learning Foundations

The foundations are for all children, including children learning English and children with disabilities. They describe the knowledge and skills that young children typically exhibit:

- at around 48 and 60 months of age;
- as they complete their first or second year of preschool;
- with appropriate support; and
- when attending a high-quality preschool program.

# Universal Design in the Mathematics Domain

## Measurement

| At around 48 months of age | At around 60 months of age |
|---|---|
| **1.0 Children begin to compare and order objects.** | **1.0 Children expand their understanding of comparing, ordering, and measuring objects.** |
| 1.1 Demonstrate awareness that objects can be compared by length, weight, or capacity, by noting gross differences, using words such as *bigger, longer, heavier, or taller,* or by placing objects side by side to compare length. | 1.1 Compare two objects by length, weight, or capacity directly (e.g., putting objects side by side) or indirectly (e.g., using a third object). |
| 1.2 Order three objects by size. | 1.2 Order four or more objects by size. |
| | 1.3 Measure length using multiple duplicates of the same-size concrete units laid end to end. |

## Geometry

| At around 48 months of age | At around 60 months of age |
|---|---|
| **1.0 Children begin to identify and use common shapes in their everyday environment.** | **1.0 Children identify and use a variety of shapes in their everyday environment.** |
| 1.1 Identify simple two-dimensional shapes, such as a circle and square. | 1.1 Identify, describe, and construct a variety of different shapes, including variations of a circle, triangle, rectangle, square, and other shapes. |
| 1.2 Use individual shapes to represent different elements of a picture or design. | 1.2 Combine different shapes to create a picture or design. |
| **2.0 Children begin to understand positions in space.** | **2.0 Children expand their understanding of positions in space.** |
| 2.1 Identify positions of objects and people in space, such as in/on/under, up/down, and inside/outside. | 2.1 Identify positions of objects and people in space, including in/on/under, up/down, inside/outside, beside/between, and in front/behind. |

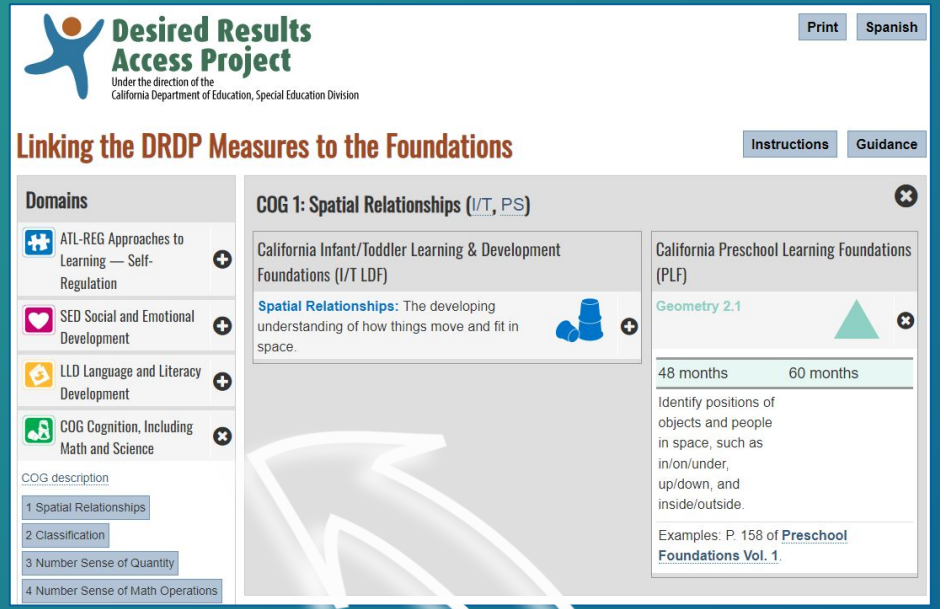
## Mathematical Reasoning

| At around 48 months of age | At around 60 months of age |
|---|---|
| **1.0 Children use mathematical thinking to solve problems that arise in their everyday environment.** | **1.0 Children expand the use of mathematical thinking to solve problems that arise in their everyday environment.** |
| 1.1 Begin to apply simple mathematical strategies to solve problems in their environment. | 1.1 Identify and apply a variety of mathematical strategies to solve problems in their environment. |

## Algebra and Functions
### (Classification and Patterning)

| At around 48 months of age | At around 60 months of age |
|---|---|
| **1.0 Children begin to sort and classify objects in their everyday environment.** | **1.0 Children expand their understanding of sorting and classifying objects in their everyday environment.** |
| 1.1 Sort and classify objects by one attribute into two or more groups, with increasing accuracy. | 1.1 Sort and classify objects by one or more attributes, into two or more groups, with increasing accuracy (e.g., may sort first by one attribute and then by another attribute). |
| **2.0 Children begin to recognize simple, repeating patterns.** | **2.0 Children expand their understanding of simple, repeating patterns.** |
| 2.1 Begin to identify or recognize a simple repeating pattern. | 2.1 Recognize and duplicate simple repeating patterns. |
| 2.2 Attempt to create a simple repeating pattern or participate in making one. | 2.2 Begin to extend and create simple repeating patterns. |

# Resource Highlight: Desired Results Access Project

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# Linking the DRDP Measures to the Foundations

This tool links the DRDP domains and measures to the applicable foundations. When used together, the reports of DRDP results and the Foundations can inform:

- Present levels of development and learning
- Annual goal and outcome development
- Short term learning targets (what to teach next)
- Families of their child's progress in the curriculum

**Working together, general education and special education teachers can determine modifications to the curriculum to increase the child's access, participation, and engagement.**

https://draccess.org/foundations/

# Resource Highlight:


# SEEDS of Partnership Preschool Planning Tool

Use this tool to plan developmentally appropriate mathematics activities in your early childhood setting.

Choose Teaching Strategies, Goals, and Additional Technology Supports to support diverse learners.

https://www.seedsofpartnership.org/planningTool.html

# Questions, Thoughts, Ideas...

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instagram.com/sipinclusion/

twitter.com/sipinclusion

youtube.com/@SupportingInclusivePractices

# Thank You!



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