



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

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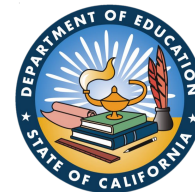
Kevin Schaefer

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

Our Mission & Vision

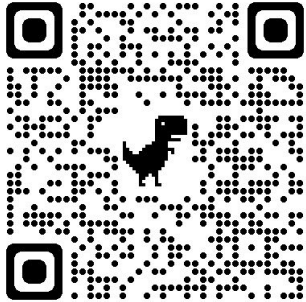
Our mission is to provide tiered, technical assistance to support local education agencies (LEAs) focused on building, implementing, sustaining, monitoring, and scaling up evidence-based practices within intentionally designed, equitable, and inclusive educational systems to increase inclusion of students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

Innovate. Include. Impact





Session Padlet



Supporting Inclusive Practices (SIP) Project • 1m
Early Math Initiative Fall Forum 2023
Multiplying Universal Access to Play-Based Early Math Curriculum

Session Resources +

- Session Slide Deck
Supporting Inclusive Practices
Multiplying Universal Access to Play-Based Early Math Curriculum
10.5.23 Early Math Forum
- Dear Teacher - YouTube Video
YouTube
Dear Teacher: Heartfelt Advice for Teachers from Students
- Activity Simplification - YouTube Video
YouTube
Activity Simplification

Inclusion Resources +

- SIP UPK Resources
sipinclusion.org
Preschool Resources - Supporting Inclusive Practices
- CDE Inclusive Early Education Resources
cde.ca.gov
Inclusive Early Education Resources
- DRAccess Webpage
Breaking It Down: Identifying Learning Targets from DPPP Results
Learn It
draccess.org
Desired Results Access Project
- Adaptations Wall Chart

UDL Resources +

- UDL Color Coded Preschool Learning Foundations
California Preschool Learning Foundations
PDF
Preschool Learning Foundations Vol 1 UDL
- UDL Graphic Organizer
udlg_graphicorganizer_v2-2_numbers-yes
PDF
- Interactive UDL Framework

Early Math Resources +

- SEEDS of Partnership Preschool Planning Tool
seedsforpartnership.org
Preschool Planning Tool
- STEMIE Resource Page
stemie.fpg.unc.edu
STEMIE
Innovation for Inclusion in Early Education
- First Steps to Math Success

Add section

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?”



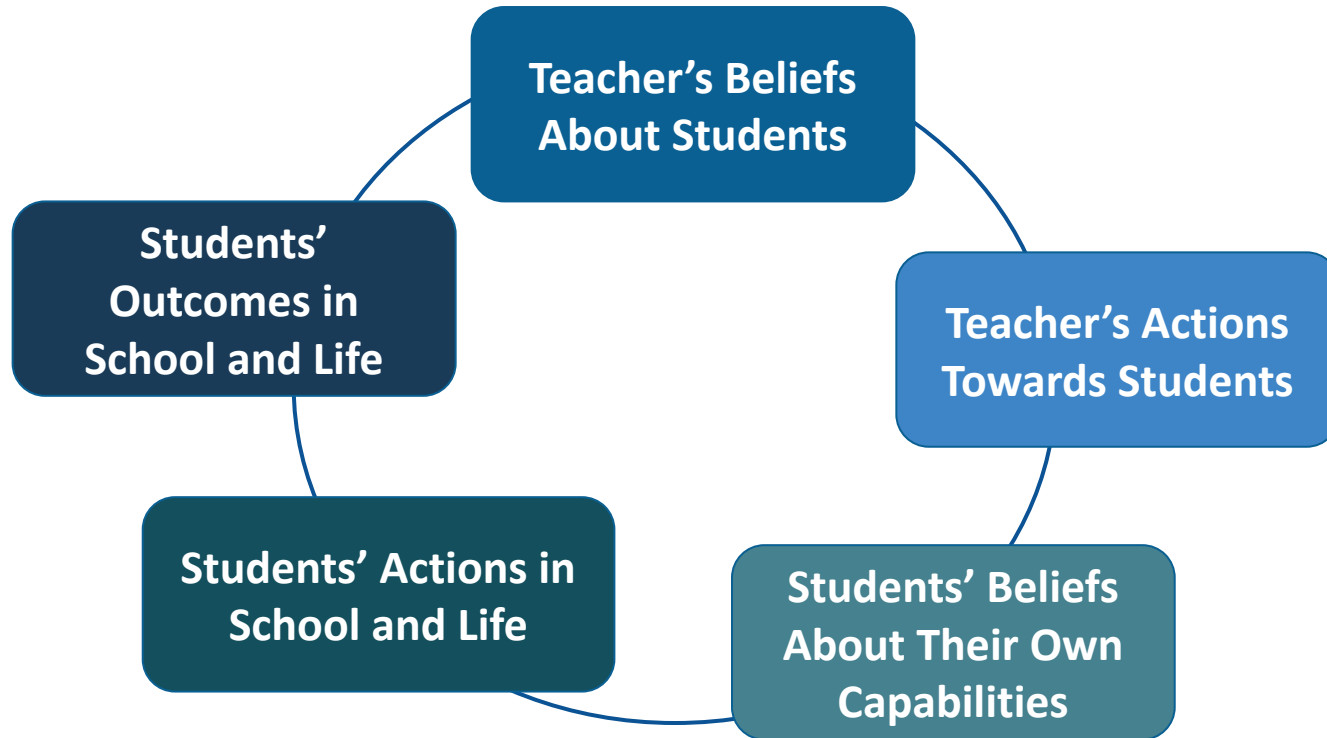
Special education law states ***students should be learning with their peers*** to the greatest extent possible



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



Belief Impact Cycle





LANGUAGE MATTERS

From that...

Stubborn

Fussy

Loud

Bossy

Wild



To this....

Persistent

Selective

Expressive

A Leader

Energetic

What can you add to your positive reframing word bank?



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

-Dr. Stuart Shanker





LEARNER VARIABILITY



Dear Teacher...



Context Matters!

A photograph showing a pair of hands gently holding a small green seedling with two leaves, growing out of a mound of dark soil. The background is a soft, out-of-focus bokeh of yellow and green light spots, suggesting a bright, natural environment. The text is overlaid on this image.

“When a flower doesn’t bloom, you fix the environment in which it grows, not the flower.”

-Alexander den Heijer



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? _____

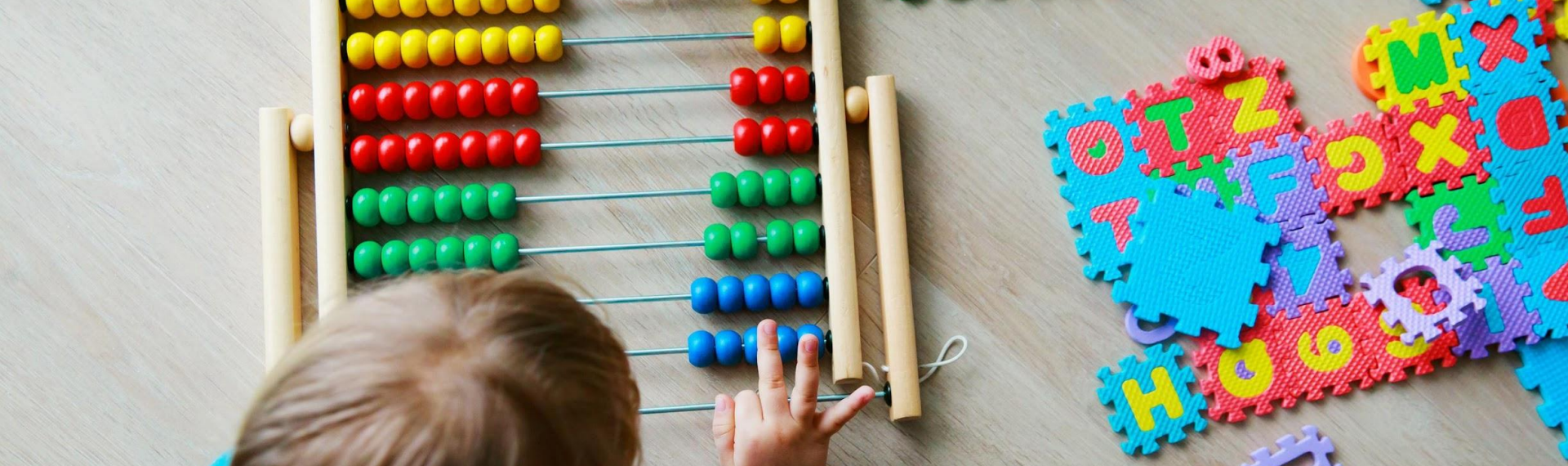
Where does your child sleep at home? _____

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.



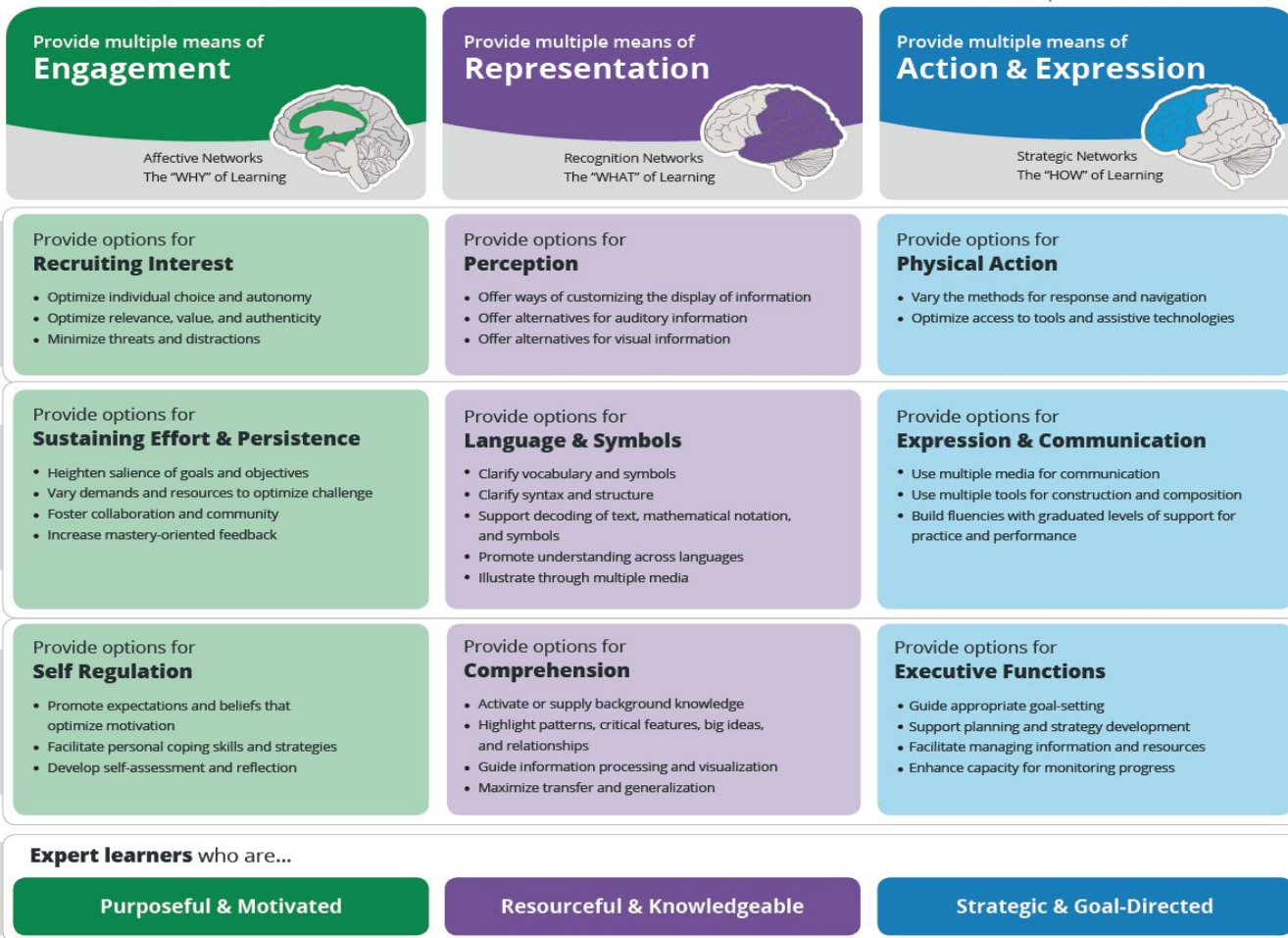
Setting the Stage by Dispelling UDL Myths

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.**







The Goal of Universal Design for Learning

Expert learners who are...

Goal

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

Monitors and regulates emotional reactions that would be impediments or distractions to successful learning

Makes connections to prior learning experiences

Activates that prior knowledge to identify, organize, prioritize and assimilate new information

Knows how to transform new information into meaningful and usable knowledge

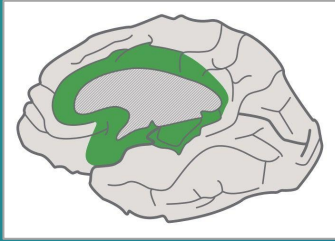
Formulates plans for learning

Organizes resources and tools to facilitate learning

Monitors their progress

Abandons plans and strategies that are ineffective

Affective Networks (The Limbic System)



Processing
Regulation

Fight, Flight, Freeze



Provide multiple means of
Engagement →

Affective Networks
The "WHY" of learning



Provide options for
Recruiting Interest (7) →

- Optimize individual choice and autonomy (7.1) >
- Optimize relevance, value, and authenticity (7.2) >
- Minimize threats and distractions (7.3) >

Provide options for
Sustaining Effort & Persistence (8) →

- Heighten salience of goals and objectives (8.1) >
- Vary demands and resources to optimize challenge (8.2) >
- Foster collaboration and community (8.3) >
- Increase mastery-oriented feedback (8.4) >

Provide options for
Self Regulation (9) →

- Promote expectations and beliefs that optimize motivation (9.1) >
- Facilitate personal coping skills and strategies (9.2) >
- Develop self-assessment and reflection (9.3) >

Expert Learners who are...

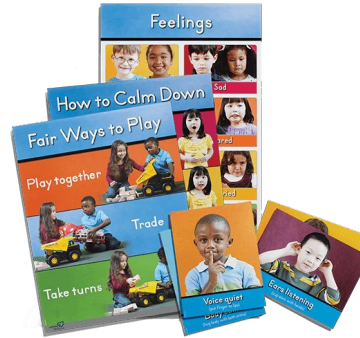
Purposeful & Motivated



Highly Preferred Items



Materials With Varying
Levels of Difficulty



Feelings Charts
Expectations & Solutions Cards

Recognition Networks (Temporal Lobe)



Perception
Recognition
Memory
Emotions



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

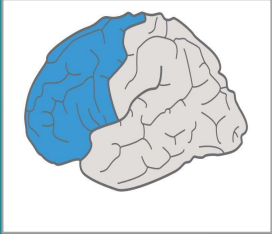


**Visual/Auditory
Transition Cues**



Activities to Support Pre-Academic Math and Literacy Skills

Strategic Networks (Frontal Lobes)



“Higher” Cognitive
Functions
Decision-making
Planning
Problem-solving



Provide multiple means of **Action & Expression** →

Strategic Networks
The “HOW” of learning



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

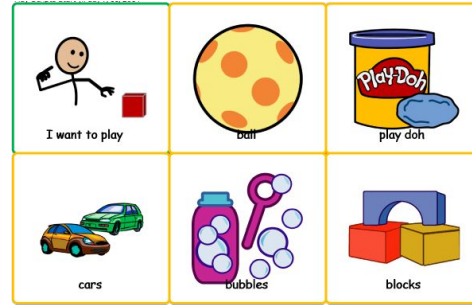
- Vary the methods for response and navigation (4.1) →
- Optimize access to tools and assistive technologies (4.2) →

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”**



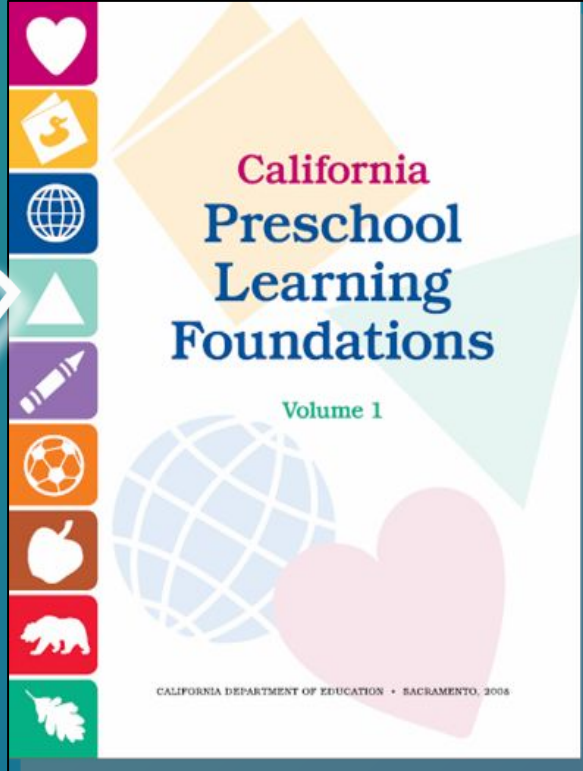
Scaffolding

Resource Highlight:

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.



Foundations of
Mathematics:
PLF Volume 1



Universal Design in the Mathematics Domain

Measurement

At around 48 months of age

1.0 Children begin to compare and order 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.

1.2 Order three objects by size.

At around 60 months of age

1.0 Children expand their understanding of comparing, ordering, and measuring objects.

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 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

1.0 Children begin to identify and use common shapes in their everyday environment.

1.1 Identify simple two-dimensional shapes, such as a circle and square.

1.2 Use individual shapes to represent different elements of a picture or design.

2.0 Children begin to understand positions in space.

2.1 Identify positions of objects and people in space, such as *in/on/under, up/down, and inside/outside*.

At around 60 months of age

1.0 Children identify and use a variety of shapes in their everyday environment.

1.1 Identify, describe, and construct a variety of different shapes, including variations of a circle, triangle, rectangle, square, and other shapes.

1.2 Combine different shapes to create a picture or design.

2.0 Children expand their understanding of positions in space.

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

1.0 Children use 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.

At around 60 months of age

1.0 Children expand the use of mathematical thinking to solve problems that arise in their everyday 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

1.0 Children begin to sort and classify objects in their everyday environment.

1.1 Sort and classify objects by one attribute into two or more groups, with increasing accuracy.

2.0 Children begin to recognize simple, repeating patterns.

2.1 Begin to identify or recognize a simple repeating pattern.

2.2 Attempt to create a simple repeating pattern or participate in making one.

At around 60 months of age

1.0 Children expand their understanding of sorting and classifying objects in their everyday environment.

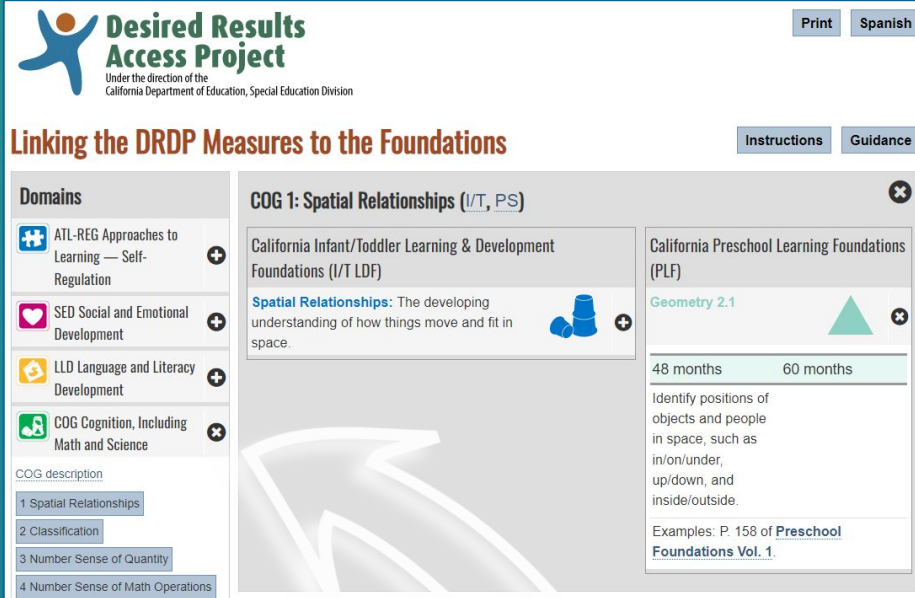
1.1 Sort and classify objects by one or more attributes, into two or more groups, with increasing accuracy (e.g., may sort first by one attribute and then by another attribute).

2.0 Children expand their understanding of simple, repeating patterns.

2.1 Recognize and duplicate simple repeating patterns.

2.2 Begin to extend and create simple repeating patterns.

Resource Highlight: Desired Results Access Project



The screenshot shows the 'Desired Results Access Project' website. At the top left is the logo with the text 'Desired Results Access Project' and 'Under the direction of the California Department of Education, Special Education Division'. There are 'Print' and 'Spanish' buttons at the top right. Below the logo is the title 'Linking the DRDP Measures to the Foundations' with 'Instructions' and 'Guidance' buttons. The main content area is divided into a 'Domains' sidebar on the left and a main panel on the right. The sidebar lists domains: 'ATL-REG Approaches to Learning — Self-Regulation', 'SED Social and Emotional Development', 'LLD Language and Literacy Development', and 'COG Cognition, Including Math and Science'. The main panel is titled 'COG 1: Spatial Relationships (I/T, PS)'. It contains a description of 'California Infant/Toddler Learning & Development Foundations (I/T LDF)' and 'California Preschool Learning Foundations (PLF)'. Under 'Geometry 2.1', there is a green triangle icon and a table with two columns: '48 months' and '60 months'. Below the table is a description: 'Identify positions of objects and people in space, such as in/on/under, up/down, and inside/outside.' and examples: 'Examples: P. 158 of Preschool Foundations Vol. 1.' A large white arrow points from the bottom left towards the main content area.

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.



Resource Highlight:



The screenshot shows the website header with the 'Seeds of Partnership' logo and 'Learning Resources' text. Below the header is a navigation menu with links for Home, Contact Us, Learning Resources, CDE Monitoring, Family Empowerment Centers, and Calendar. The main content area is titled 'Preschool Planning Tool' and contains several paragraphs of text describing the tool's purpose and history. Below the text is a 'Get Started' section with a list of five steps. At the bottom of the content area are three buttons labeled 'Social-Emotional Development', 'Language and Literacy', and 'Mathematics'. A 'Helpful References' section at the very bottom lists 'California Preschool Learning Foundations, Volume 1'. A large white arrow points from the 'Mathematics' button towards the text on the right side of the slide.

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.



Questions, Thoughts, Ideas...



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youtube.com/@SupportingInclusivePractices

Thank You!

