

Making Materials Accessible for Early Math

Engaging learning environments have materials purposefully chosen for children’s different abilities and developmental levels.

	<ul style="list-style-type: none"> • Children should have access to math manipulatives that appeal to multiple senses (visual, touch [a variety of textures], hearing, and kinesthetic opportunities). • When exploring the LTs allow time to prepare and organize materials before introducing the activities. • Are additional support materials available for children to explore independently? (i.e., books on topic, pictures of topic, etc.)
Fine Motor	<ul style="list-style-type: none"> • Provide alternative materials: larger vs. smaller blocks; rigid vs. flexible materials; 3D vs 2D materials, etc. • Put materials in a bowl or on a paper plate to allow for easier grasping • Use interlocking manipulatives when applicable • Add Velcro or tape to materials to keep them from scattering. A tray or shallow dish may also be useful for keeping materials close to the child.
Cognitive	<ul style="list-style-type: none"> • Prior to the activity, prepare visuals (graphics for first/then, choice boards, expectations/ social stories, visuals for individual steps of an activity). • Do the math manipulatives incorporate children’s interests? (i.e., dinosaurs for counting). Giving choices creates “buy in” for the child. This could be color, theme, texture, etc. • Model how to use the tools/materials. • Provide time for children to explore materials freely so that the novelty of materials is reduced during the learning activity.
Engagement	<ul style="list-style-type: none"> • Be sure materials are within a comfortable reach for each child • Have only materials/tools needed for the activity available to limit distractions • Provide objects that are weighted – the weight may increase attention to tasks • Use objects that have bright colors (this does not apply to visual impairments) • Rotate materials to maintain interest. • Keep materials available long enough to provide consistency and ample time to use for learning.
Visual	<ul style="list-style-type: none"> • Utilize materials that have a stark contrast in color (e.g., black and white) • Children with visual impairments may be able to see some colors better than others, like red and yellow.
Instructional Suggestions for Materials	<ul style="list-style-type: none"> • Hand materials to child one at a time. First, hand materials with correct orientation; then, if child is able, begin “just handing” the materials and have child independently orient correctly. This may take some hand-over hand assistance before full independence