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Research exercise: of Object Saliency on Early Mathematics and Cognitive Skills

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Effects of Object Saliency on Cognitive Skills
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Introduction
The primary focus of our study is to explore the effects of the representational status of stimuli on executive functioning skills and early mathematics skills performance in preschoolers.

Graded Representation
• Theory explaining limits on young children’s attention skills.
• Ability to attend to relevant features of an object is dependent on the salience of irrelevant features (Yerys & Munakata, 2006).
• We predict that computerized tasks and tasks using unfamiliar items will produce the best performance in young children.

Executive Functioning Skills
• Cognitive skills important for planning and problem solving
• Critical for early academic success, especially in mathematics
• Assessments use a variety of stimuli
• Which stimuli promote best performance (real objects, pictures, computerized task)?

Non-Symbolic Numerical Magnitude Comparison
• Ability to determine which group of objects has more without counting.
• Important for early academic success in mathematics
• Assessments use both abstract and concrete objects
• Which stimuli promote best performance (perceptual saliency, familiarity)?

Day/Night Task
• Ability to determine which group of objects has more without counting.

Dimensional Change Card Sort
• Cognitive skills important for planning and problem solving
• Critical for early academic success, especially in mathematics
• Assessments use a variety of stimuli
• Which stimuli promote best performance (real objects, pictures, computerized task)?