

Research Spotlight

The Finding Stars Game

Dr. Erez Freud, a postdoctoral fellow in the Department of Psychology, is working with Dr. Marlene Behrmann on a research study that aims to characterize the developmental trajectory of visuomotor object control.

The ability to interact with objects is crucial for every aspect of our lives through childhood and adulthood. Our understanding of how we are able to reach and grasp objects so effortlessly and how these skills develop over childhood remains rather poor. To shed light on this question, researchers will play the "Finding Stars" game. In this game, right-handed 4 and 5-year-olds will be asked to grasp objects of different shapes and sizes to look for a star sticker that is placed underneath a subset of the objects. Researchers will measure different aspects of the reach and grasp behavior, such as speed, width of finger opening, etc., using a Optotrak camera that records the 3D motion of the hand, which then allows the team to describe children's visuomotor behavior in detail. Three LED markers (lights) will be taped to the child's right hand to enable accurate movement tracking. Importantly, the LED markers are merely infrared lights that do not emit any signal. This study will help researchers to understand to what extent shape sensitivity, in a visuomotor task, is developed in children aged 4-5 years old.



Undergraduate Researchers in Training

Students in Dr. Anna Fisher's **Developmental Research Methods** class are preparing their final projects for the semester. Though the research protocols are still being developed, the students are planning to study many educationally relevant early childhood tasks. Learning the impact of the variables studied on children's performance and learning can help parents and educators better choose approaches for supporting their progress.

- **The Finding Game** – Exploring whether adult digital game play with visuals and sound impacts Preschool 3's and Kindergartners' attention and performance on a picture finding task.
- **The Puzzle Game** - Testing whether using mindful breathing as a break increases persistence on a challenging puzzle in comparison to a "typical" wiggle break for preschool 4's & Kindergartners.
- **The Story Game** – Investigating the effect of imagining an observer vs. a participant role on suggestions for peer conflict resolution strategies given by 4 and 5-year olds.
- **The Animal Game** – Exploring whether Preschool 3's and Kindergartners learn factual information about animals better when animal characters are represented realistically instead of in anthropomorphic ways.

Families whose children participate will receive fuller parent descriptions via the child's backpack. Everyone can read the study descriptions on the Research Bulletin Board to the left of the Children's School office. What an interesting set of developmental psychology topics!