Keeping Parents Informed about Research

The **Research Spotlight** section of the monthly newsletter is one way Children’s School parents can learn about research in progress. Also, each time your child participates in a study that involves playing a “game” with a researcher (i.e., as opposed to merely being observed), he or she will get a **participation sticker** suggesting that you, “Ask me about the … game” and a **study description** detailing the task. We also have **recent articles** resulting from Children’s School research posted on the school website ([www.psy.cmu.edu/childrensschool](http://www.psy.cmu.edu/childrensschool)) and a notebook of articles in the office.

**Observations for Psychology Assignments:** Students from Dr. David Rakison’s Child Development class have already begun their periodic observations this fall. For each assignment, they observe specific differences between preschoolers and kindergartners in motor skills, social interactions, language, etc.

**Research Methods Class Studies:** Students in Yevdokiya Yermolayeva’s Developmental Research Methods class will start with a lab entitled the **Find the Houses Game** to explore the evolutionary basis for adults’ tendency to have superior memory for information relevant to survival. Specifically, they will test whether 4 year olds’ incidental memory will be better for natural objects that are food or water vs. flowers or other non-edible items, as well as whether the effect is stronger for objects shown in context vs. in isolation. Students in Bryan Matlen’s Developmental Research Methods class will start with a lab entitled **The Day / Night Game** to explore 3 and 5 year olds’ developing “executive function” but asking them to give a response that is counter to their perception and knowledge (e.g., saying “night” when shown a picture of the sun) or just counter to their perception (e.g., saying “night” when shown a checkerboard). Students from both classes will then work in groups to conduct a study of their own design, which will be approved both by their teacher and by Dr. Carver.

Feel free to contact Dr. Carver to discuss any questions you have about research.

**Research Spotlight**

**The Similarity Game**

Dr. Anna Fisher’s research team is investigating how young children learn synonyms. They are particularly interested in examining how factors such as co-occurrence in child directed speech (e.g. *bunny-rabbit*) influence how children learn synonyms. In addition, they are exploring whether children are able to use their knowledge of synonyms in order to solve reasoning problems. In this study, the researchers will present children with reasoning tasks in which children must rely on their knowledge of synonyms in order to solve the problem. In the Similarity Game, children are shown identical pictures of doors or trees similar to the ones presented below. The children are told about objects that are hidden behind the doors/trees. For example, researchers might tell children that there is a turtle, a basketball, and a crab behind each door. The children learn that one of the objects has a particular property, and then the children must decide whether this property can be generalized to the other two objects.
Research Spotlight continued …

The Listening Game

Research Assistant Amy Barrett, who works with Dr. Anna Fisher, is investigating how young children learn synonyms. The researchers are particularly interested in examining how factors such as co-occurrence in child directed speech (e.g., bunny-rabbit) influence how children learn synonyms. In addition, they are exploring whether children are able to use their knowledge of synonyms in order to solve reasoning problems. In this study, children listen to audio recordings of word pairs (co-occurring synonyms, like rock-stone, or non co-occurring synonyms, like rock-cup) while engaging in a task such as coloring a picture or building a puzzle. In another session, children will complete a variety of reasoning tasks, such as the Help Zibbo Game or the Similarity Game, requiring them to rely on their knowledge of synonyms in order to solve the problem. The researchers are interested in the degree to which children utilize their knowledge of synonyms in various reasoning tasks. Parents will receive separate descriptions for each of the reasoning tasks used.

The Moving Eyes Game

The world around us is complex and maintaining focused attention can sometimes be challenging even for adults. The goal of this project in Dr. Anna Fisher lab is to investigate the developmental course of deliberate selective attention and to examine factors that play a role in attentional selectivity at different points in development. In this project, researchers ask children to play a game in which they see several objects moving on a Tobii T60 eye tracker (which looks like a typical computer screen) landing on one of the nine screen locations, each a different color. Children are instructed to watch a particular object while ignoring the rest of the objects. When the objects stop moving and disappear from the screen, children are asked to name the color of the grid in which the object disappeared. Children play the Moving Eyes Game several times, tracking either many objects or just a few objects at a time. Additionally, if there are technical issues with the eye-tracking hardware, a session may be begun on one day and finished on a later day. Children’s performance in the Moving Eyes Game will help researchers to map the developmental course of deliberate selective attention and improve scientists’ understanding of this basic cognitive ability required for successful performance in many everyday tasks.

Your Baby Could Be A Scientist!

The Carnegie Mellon University Infant Cognition Lab and Language & Learning Lab are looking for infants between 3 and 26 months to participate in our safe, quick, and fun studies.

What we do: We are interested in how babies learn about the world around them. Our studies last no more than 45 minutes, and take place in the infant labs located next to the Children’s School. We will have your child watch a computer display and play with some small toys while we observe his/her behavior.

To learn more or schedule participation, please contact us!

(412) 268-6122, cmu.icl@gmail.com
Research Spotlight continued …

The Apple Game

Researchers from the ENGAGE project are designing an educational computer game to teach basic physics concepts to 5- to 9-year-old children (grades K through 4). The game is designed to help children understand the distribution of weight and distance for balancing structures. Socio-emotional learning goals are being incorporated into the game as well as scientific inquiry. In order to better understand the socio-emotional aspects of learning, Mitra Fathollahpour is conducting a study in which participants complete a one-time short, multiple-choice illustrated questionnaire on computers. The researchers are particularly interested in whether the responses children suggest for challenging situations reflect Positive Interdependence, Collaboration, and Discussion. A voice-over feature (recorded by Mrs. Flynn, who taught at the Children’s School for the past three years) is available for children who are not yet reading. The sample problem below is designed to see whether children will suggest asking for help rather than quitting or trying to manage less effectively alone.

The Help Zibbo Game

In this reasoning study being conducted by Dr. Anna Fisher’s research group, children will assist Zibbo as he organizes and counts objects. In this task, children will be told where Zibbo will put a particular object. Then children will be asked to predict where they think Zibbo will put other objects. For example, children may be told that “Zibbo will put his cup here. Where do you think Zibbo will put this cup/basketball?“). Subsequently, children will be shown pictures of various objects and asked to help Zibbo make “more-or-less” judgments about the pictures. For example, children may be shown 7 pictures of flowers (5 red roses and 2 white daisies). Then children may be asked to help Zibbo find out if they have more roses or if they have more flowers.