We’d like to start by expressing our gratitude to everyone who has helped us with our research! Whether you have brought your child(ren) in to participate in a study – or many studies – or have helped spread the word about our work, we couldn’t have done it without you! You are the reason we are able to continue learning and discovering what children know, and the reason our work has been featured in outlets like the New York Times, Time Magazine, and Good Morning America. Thank you!

Now that you have taken the time to make our research possible, we would like to take the time to update you on the progress of our studies.

Research on the go!
Fourth year graduate student Jasmin Perez presented findings from her Surprise studies (featured right) at the 2019 Society for Research in Child Development this past April. Further findings from this and other studies will be presented this October at the 2019 Cognitive Development Society Meeting in Louisville, KY!

Wait, what? Infants test objects following a surprise
Babies look longer at surprising situations than expected ones. Previous research from our lab shows that they not only look longer at surprising events, but they test the properties of objects involved in surprising events (like banging a ball against a surface after having seen it go through a solid wall, or dropping an object after seeing it float in mid-air). In our Surprise studies, we want to know more about how babies explore and learn about objects that are involved in different kinds of surprising events, and how this may change as they get older. One group of 12-month-old babies saw a truck go through a solid wall and then at 18-months came back and saw an object float in mid-air. This series of experiments is ongoing, but preliminary data reveal that those infants who looked longest at the surprising events at 12-months also looked longest at the surprising events at 18-months. What might this mean? Check out our “Search for an explanation” section on the other side to find out!

Probably a necessary impossibility
How do we decide when to bring a rain jacket before we leave the house? We weigh the probability of it raining. If it’s sunny, we may not think about a jacket at all. It’s our visible environment that cues us into what we should do. In a new study, we hope to figure out what probabilities 3- to 6-year-olds tune into when making decisions. Children use our ramp machines to determine which ramp has the best likelihood of an event occurring. Preliminary data reveal that as children grow, they get better at tuning to different probabilities to make more knowledgeable decisions.
Infants, toddlers, and preschoolers are all attuned to emotions. They know when you’re happy, sad, and everything in between, using a combination of sounds and facial expressions to determine how someone is feeling. What else can young children use emotions for? One possibility is that they can use emotions to make inferences about aspects of the world that they can’t directly observe. Here, we have been asking whether babies can use emotions to figure out how many objects are hidden in a box. Infants saw a person look inside the box and say words like yuck, wow, yay, and eew. When the emotions were inconsistent, like “yuck” and “yay,” infants older than 22 months looked for a second object, while younger infants did not. This shows that by 22 months, infants can use emotions to make inferences about hidden aspects of the world! Wow! Yuck! Where are they? Do I want all or each of them? Babies know the difference We use words to represent numbers more than you might think. Words like all, each, every, and none refer to quantities, and help us track relationships between sets. Do we need to learn these words in order to represent concepts like these? In this study, we ask whether babies can tell the difference between “each” and “all,” using videos of shapes chasing balls. In one video, each shape is chasing each ball, and in another, all the shapes are chasing one ball. So far, babies appear to tell the videos apart, suggesting that the concepts each and all may be available even in infancy! What’s a coincidence?! Bumping into an old friend in a new place, hearing an old song you were just thinking about—these are hallmark examples of coincidences. How do we reason about coincidences, and how does this ability develop? In this study, we tell children stories about different events and ask them to think about how they happened. So far we have been finding that even quite young children think about coincidences in similar ways to adults. Children as young as 5-years old treat the same events as coincidences as you and I do. Our ongoing work seeks to understand how this ability first emerges. The search for explanation Children look longer at surprising events, but why? We think that infants and children may be searching for information that can help explain a surprising event. If so, then giving them an explanation about how an impossible event happened may impact how they explore the surprising objects (see our Surprise! section). Our work with 12-, 18-, and 36- to 60-month-old children shows that when given a resolution to a surprising event children are no longer surprised and move on to exploring new things! In the community! The lab loves to attend events in the community! You can find us at the Johns Hopkins University Spring Fair and the Abell Street community Fair, getting to know you and talking about science!! Come Visit Us Again Soon! Thank you for your participation in our research! We hope you come back to visit us soon! If you’d like to see if your child(ren) are eligible for any of our new studies you can give us a call at (410) 516-6068 or email us at infant.research@jhu.edu. We also have studies at the Maryland Science Center in the Inner Harbor for children 2 and older; we’re there Friday and Saturday afternoons!