3..2..1..Blast Off!: Scanning kids’ brains in a “spaceship”

This is our 3rd and final newsletter in the series about the current study. But don’t worry, the newsletters will continue with our regular content.

In WHALE, child participants join us on campus at the Biomedical Research Imaging Center (BRIC) for an MRI scan of their brains! To help kids get comfortable with the experience, we prepare them with information in advance and practice with a mock scan so they can see what it feels like before the real experience. We often describe the scanner as a spaceship to make the experience more fun. Our friends in CA (Silvia Bunge & Moriah Thomason) made a video about what it’s like to have an MRI scan. If you haven’t seen this yet, we encourage you to check it out, as our scans are very similar to theirs!

At this visit, we have children participate in a series of activities both inside and outside of the scanner. They first practice all the games and activities that they will do inside the scanner spaceship (and pick out the prizes they will win for playing each one!) so they know exactly what to expect. In the "Sea Creatures Game," your child will try to catch some sea creatures, but not others, by pressing a button. This shows us how your child remembers and responds to different rules. In the "Guessing Game" they'll guess which of two characters is hiding behind a question mark to either win or lose pretend coins, so we can learn how your child responds to earning and losing rewards. Finally, in the "Stories and Pictures game," they'll see pictures of kids in different situations, feeling different emotions and then hear a short story about what is happening to the child in the picture. This is a game you'll help us with by recording stories for your child to hear while they play. We are interested in how children regulate their emotions with the help of their caregivers and other adults. Winning the prizes for these games is not based on how well they do; we just ask them to try their best!

Parents who’ve had a medical MRI scan themselves may wonder how this research MRI scan will be different for their child. Here are some kid-friendly things we do to make our participants more comfortable. We provide your child with ear protection, including earplugs and headphones, so that the noises the MRI machine makes are not too loud for them. We also give them pillows and a weighted blanket.

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They'll also be entertained throughout the entire scan! Between the games, they'll watch a Disney movie they chose before entering the scanner. Finally, one of our study staff members, whom your child will have spent time with throughout the day, will be standing right next to them throughout the scan, so they will not be alone. Children are motivated to earn “staying still points” throughout the scan to win an extra special prize at the end of the day. We encourage them to stay still in the scanner to help us get the best images possible of their brain.

We complete these activities to learn more about early childhood brain structure and about how young childrens’ brains respond while they are completing activities related to attention, reward processing, and emotion regulation. There is no “right” way the brain should look or respond during these tasks, so we wouldn’t be able to share results about an individual child’s performance. In fact, few studies have even tried to investigate brain activation in children this young, so there is still a lot to learn and we can’t wait to share with you! We hope all our WHALE participants enjoy the scan experience!

## RESOURCES

### HOUSING
- Durham Continuum of Care (CoC)
- Eviction Information: 216-965-5095
- Durham Rescue Mission
  - 919-688-9641
- Orange County Partnership to End Homelessness
- Urban Ministries of Durham
- Durham County Social Services
- Orange County Social Services
- Wake County Social Services

### FOOD & GROCERIES
- Wake County Public Schools Free Meals
- Durham County Public Schools Free Meals
- Orange County Food Resources
- Chapel Hill/Carrboro Schools
- TABLE
- Food Bank of Central & Eastern North Carolina
- Wake County Food Resources
- No Kid Hungry NC - Text FOODNC or COMIDA to 877-877 to receive information about 3 drive-thru or pickup sites with meals for kids closest to you

### HEALTH & SAFETY
- Compass Center for Women and Families
  - 919-929-7122
- Durham Crisis Response Center
  - 919-403-9425
- InterAct Family Safety and Empowerment Center
  - 919-828-7501
- Orange County Rape Crisis Center
  - 866-935-4783 (call), 919-504-5211 (text)
- Freedom House
  - 919-967-8844 (Crisis Unit, Chapel Hill)
  - 1-877-967-8844 (Mobile Service)
- Suicide prevention lifeline: 1-800-273-TALK (8255)
- Hope4NC Helpline: 1-855-587-3463
- Crisis Text Line: Text HOME to 741 741

### CHILD CARE
- NC Hotline for Critical Workers Seeking Child Care Options
- Covid Childcare Co-op Creator
- Covid Urgent Childcare
- Child Care Services Association

### LEARNING
- Scholastics Learn at Home
- Khan Academy
- PBS Kids
- CDC Tips for Talking with Children about COVID-19