



## SPRING ACTIVITIES

Here are a few inexpensive activities for you to try this spring.



**SPRING TREE SILHOUETTE:** Instruct your child to rip up masking tape into strips and then arrange these strips on a paper canvas to create the outline for their spring tree. Then, have them press down firmly on their masking tape tree with a Popsicle stick in order to ensure

that paint will not get under the masking tape. Your child is now ready to paint their tree silhouette with watercolor paint. Once your child has finished painting, put the project away for several hours to dry. When the painting is entirely dry, carefully peel off the masking tape. Now, your proud artist is ready to hang up their artistic creation!



**COLORFUL MELTING ICE:** As winter comes to a close, try this fun experiment with your child. This activity is also a good opportunity for you to talk with your child about the science behind how salt affects the melting point of ice! First, freeze water in a baking pan overnight.

Once your ice is ready to begin the activity, prepare a tray of liquid watercolor paint. Pour salt directly into the tray of watercolors, and set aside a bowl of warm water for cleaning the paintbrushes and speeding up the melting process. Instruct your child to paint the ice, and watch their fascination as cracks form and the ice begins to melt!

## CONTACT US!

Do you have questions about the WIND Study? Did you recently move, or change your phone number or e-mail? Please let us know so we can stay in touch. Call or e-mail us anytime.

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**SOCK BUNNIES:** This simple activity is a great way for your child to create their own spring bunny. First, fill a colorful sock with a cup of rice. Then, tie two clear rubber bands around the sock – one on the neck and the other on top of the head – to create the head of the bunny. Cut out a contrasting piece of felt to create a “belly” for the bunny, and then glue this onto the bunny’s body. Also, cut the top of the sock in half to create ears for the sock bunny. Now, your child is ready to decorate their sock bunny however they please! Some potential ideas for accessories are movable eyes, cotton ball tail, felt nose and teeth, and a bow in your child’s favorite color.



## WIND STUDY PROGRESS

Thank you for your continued participation in the WIND Study! Whether your child is almost 3 years old (the youngest in our study) or just over 6 (the oldest), we truly appreciate everything you have done to stay involved.

To date, over 500 children have completed their age 3-year in-person visit! Please call us if you haven’t completed your age 3-year visit and we’ll schedule a time for you to be seen.

“You guys are super nice and respectful, and your presents are greatly received! I also enjoy sharing with you what I experience with my granddaughter. I am a real worrywart about her, so I appreciate that very much. I’m happy that we got involved in the program.”

- WIND Study Parent

## WIND STUDY RESEARCH UPDATE: NASAL AIRWAY MICROBIOME AND BRONCHIOLITIS

In a previous newsletter, we discussed the human microbiome, or the trillions of microbes living inside and on a person's body. Since these microbes are alive and functioning inside of us, scientists are trying to figure out ways to use the human microbiome to help prevent diseases, like asthma.

While most early microbiome research has focused on the gut microbiome, scientists have begun to study the airway microbiome and its relationship to diseases. Scientific studies have shown that the airway microbiome affects how the body's immune system responds to infectious agents like viruses. This activity suggests that the microbes living in a person's airway may actually play a role in the development of acute respiratory infections, such as bronchiolitis. However, until recently, no one had studied the relationship between the airway microbiome and the development of bronchiolitis in infants.

We're happy to report that the swabs that you collected for the study are helping us to study this important idea.

We recently published a scientific article explaining how the airway microbiome might be associated with bronchiolitis in infants. We compared nasal samples provided by children in the WIND Study while they were hospitalized to those from children without a respiratory infection. Briefly, we found that infants fall into one of four distinct groups of airway microbiota, and that one of the four groups was associated with a higher likelihood of bronchiolitis. While these results do not explain how the microbiome works in bronchiolitis, they do demonstrate that the microbiome probably plays an important role in bronchiolitis.

These findings were published in *The Pediatric Infectious Disease Journal*. If you ever want a copy of one of our WIND Study papers, please write to us and we'll send a PDF version to you!

You will hear more about the microbiome and the WIND Study in the months ahead.

## IN-DEPTH: ENVIRONMENTAL INFLUENCES ON CHILD HEALTH OUTCOMES (ECHO) PROGRAM

Recently, the National Institutes of Health (NIH) launched a new seven-year research program called Environmental Influences on Child Health Outcomes (ECHO). The plan is to combine data from existing research studies on child

health, which then will allow the NIH to examine how environmental factors affect child health and development. By combining data from already existing research studies with data gained from future studies, the NIH hopes to address important questions about child health that could not be answered by each study alone.

As we announced in the last newsletter, the WIND Study is one of the 35 studies that was selected to be a part of ECHO. This means that we received funding to continue checking in

with you every six months to learn about how your child is doing, so that we can improve our understanding of childhood breathing problems. The studies in ECHO will focus on four key areas of child health research – pre-, peri-, and postnatal

outcomes (such as low birth weight); neurodevelopment (such as autism); obesity; and airways (such as asthma).

As part of the ECHO program, we are enrolling an additional 600 infants who have not been hospitalized for a breathing problem in outpatient primary care clinics in Boston,

Louisville, Philadelphia, and Phoenix. We plan to compare this new group of children to the WIND Study children.

Click [here](#) to read about ECHO on the NIH website.

